

ANGLO- SOVIET JOURNAL

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Organ of the Society for Cultural Relations with the USSR

THE NEW FIVE YEAR PLAN

CERTAIN aspects of the directives for a new (fifth) Five Year Plan, published in draft for discussion in October, seem to call for particular comment. The following observations are offered without pretending that they can replace a detailed study of this document of capital importance.

1. The national income, as defined by Soviet economists, is the net sum-total of new values produced in the various branches of material production. It is a pool into which there flow the fruits of man's labour in socially owned enterprise from many different spheres of industry, agriculture, transport, etc., after replacing what was consumed in their production. Hence it is an all-round measure for summing up, in a single figure, the economic activity of the Soviet people during the period reviewed.

In 1913 (reckoned in 1926/27 prices) the national income stood at 21 milliard roubles; by 1928, the end of the period of economic restoration after the ravages of the first world war and the foreign invasions (1914-1922), it had been brought up to 25 milliards. Thereafter its **annual** rate of increase (in round figures) has been (in years for which figures are known):

Five Year Plan	I (1929-32)	—	5 milliard roubles p.a.
" " "	II (1933-37)	—	10 " " "
" " "	III (1938-40)	—	10½ " " "
" " "	IV (1948-50)	—	20½ " " "
" " "	V (1951-55)	—	25½ " " "

The much slower rate of increase during the years before the third Five Year Plan was interrupted by the Nazi attack on the USSR reflects the large numbers of people who had to be withdrawn from material production (particularly agriculture) when the Soviet Government was looking to its country's defences.

Since 1950 production values have not been measured by the 1926/27 level: but the new plan lays down that the national income is to increase by 60% over the 1950 figure. Thus it is possible to complete this table, which shows the **increasing acceleration** of Soviet advance towards unprecedented abundance for all. The advance is due to the constant expansion both of the means of creating wealth and of the ability to use them efficiently.

2. The principal source of the national income is in the sphere of industry. Its 1913 gross output is valued at just over 16 milliard roubles: in 1928 it was 19 milliards. Since then the **gross** output has increased and is to increase at the following rate:

Five Year Plan	I (1929-32)	—	5½ milliard roubles p.a.
" " "	II (1933-37)	—	under 10½ " " "
" " "	III (1938-40)	—	14½ " " "
" " "	IV (1946-50)	—	22½ " " "
" " "	V (1951-55)	—	33½ " " "

Partly, of course, this breathtaking rate of advance is due to the growing number of factories, volume of equipment, and supplies of raw material. But it is also in large measure due to extensive mechanisation, electrification and other processes which increase productivity; and to improvement in the skill of the workers themselves.

The rise in productivity per head has been and is to be as follows:

Five Year Plan	I (1929-32)	—	41% (in 4 years)
" " "	II (1933-37)	—	82% (in 5 years)
" " "	III (1938-40)	—	32% (in 3 years)
" " "	IV (1946-50)	—	37% above 1940
" " "	V (1951-55)	—	50% (in 5 years)

The reflection of widening mastery of up-to-date machinery, and of the

growing sense of responsibility among the workers for the industry in which they are engaged, is the movement for Socialist emulation. Its preliminaries showed themselves as early as 1919; some account of their development up to 1947 can be found in the present writer's "Man and Plan in Soviet Economy." In recent years workers' inventiveness has made a further stride forward. There were 450,000 proposals for technical improvements and rationalisation in 1949, 600,000 in 1950, and nearly 700,000 in 1951. Obviously this is not a sphere in which statistical planning is possible; but the authors of the fifth Five Year Plan, after years of experience, can evidently rely upon the working class in this respect.

Thus, only two-thirds of the resources needed for a 90% increase in State expenditure on capital construction are to be found out of State funds. One-third is to come from cuts in overhead expenditure and in building costs, and from increased productivity. The costs are to go down 25% in industry, 20% in building, 15% in railway transport and so forth. Bearing in mind that, as will be seen later, both wages and numbers employed are to increase very substantially, it can be concluded with confidence that in all these fields it is the emulation of the working class (and collective farmers too, as suppliers of raw materials) that is looked to.

3. Grain output is to go up 40–50% during the five years. This is more than in the last Plan (5%)—a great part of the period was taken up with restoring what had been destroyed—and even more than in the best pre-war period of 1938–40 (33%). It is difficult—but is it impossible? Not when we recall that the best average of Tsarist days (1909–13)—75 million tons—was already exceeded before the last war (in 1933–38), when the average was 90 million tons, and far outpaced in 1940, and again in 1947–51, when the average was nearly 119 million tons.

Similarly it may seem a tall order for cotton output to be raised by 55–65%; but less so when we remember that the best figure of Tsarist days was only 25% of the level reached in 1938, at the beginning of the third Five Year Plan.

A major factor in achieving these and similar results is the extensive and rapid mechanisation of Soviet agriculture. Ploughing for grain crops is already more than 90% mechanised: harvesting by combines in this branch, which gathered 50% of the crop two years ago and 60% last year, is to go up to 80–90%. Sugar-beet harvesting is to be 90–95% mechanised, and potato-lifting 50–60%. Thus the traditionally backbreaking occupations are to be deprived of their terrors by the combination of mechanical ingenuity with lavish expenditure in the interests of the workman.

Moreover, the area of irrigated land is to increase by one-third, and of drained land by two-fifths, during the five years ending in 1955. At this point the great hydro-electric and water-distribution schemes, known in the USSR as "the great building-jobs of Communism," will begin to make their impact fully felt.

4. A major feature of the draft directives is concerned with the conditions of life of the Soviet people. In the first Plan, the output of means of production increased by 39%, and that of consumer goods by 22%: by the third, the figures were 17% and 11% respectively: now, in the fifth, the gap is still narrower—13% and 11%. It must be remembered, of course, that the percentage in each case represents a vastly higher **absolute** level of output than its predecessor.

The output of such goods as meat, sugar, butter, fish, cottons, woollens, leather footwear, is to go up by 70%—which means the necessary equipment, raw material, labour and wages funds being made available—and this figure compares very favourably with (and in some cases exceeds for the first time

for many years) the percentage increases provided for coal, iron, steel, oil and engineering. And it is not every country in the world that is planning, in the next four years, for retail sales of meat going up 90%, butter 70%, sugar 100%, fabrics and clothing 70–80%, compared with 1950. There might be some doubt about the total figure of a 70% rise in such sales—if they had not been doubled in the previous Five Year Plan.

By continued price reductions, as well as by rises in cash wages, there is to be a further rise in real wages. Here, too, it is useful to look back, just because of the legends still in circulation about the alleged forcible retention of low living-standards in the USSR. During the first Five Year Plan, real wages went up 50% : during the second, 100% : after a further rise by 1940, followed by the great privations of wartime, and the fulfilment of the fourth Plan, real wages had gone up some 60% by 1950 : last year they went up again by 10%. Thus the rouble in the purse of the Soviet housewife already buys two-thirds more than it did before the war : and by 1955 it will be buying considerably more than double.

To this are added prospects which, again, not many other countries can offer. Thus, capital invested in housing is to be doubled : there is to be a 30% increase in the number of public libraries : hospital beds are to be increased in numbers by 20%, kindergarten places by 40%, and the number of medical students trained by 25%. These are but a few of the significant figures. Perhaps the most significant of all, however, is the announcement that by 1955 there is to be universal secondary education (7–17) in all large towns, and preparations for extending it to the rest of the country by 1960. Moreover, the last years at school are to be partly devoted to polytechnical education, preparing the boy or girl for a future profession while completing general education.

What this entails is shown by the provision for the number of students entering teachers' training colleges to rise by nearly 50% in five years, of graduates from places of higher and continued education by 33%, and of post-graduate students by 100%. Once again, as nearly two years ago, the question may be asked whether such programmes are compatible with preparations for aggressive war, or for "rolling back the mud" of some system of which the Soviet leaders do not approve.

5. Those drafting the new Five Year Plan are evidently convinced, on the contrary, that they are preparing for co-operation with the rest of the world. For one thing, the agricultural section of the Plan provides for large surpluses of grain, timber and other traditional Russian export commodities. Tsarist Russia exported 9–10 million tons of grain annually, out of a harvest averaging 75 million tons—half-starving the mass of its population in the process. But an output averaging 120 million tons **already** allows both big exports and a well-fed people ; and by 1955 the output is to be nearly half as much again. Furthermore, the directives lay down that the tonnage of ocean-going cargo vessels and tankers is to be almost doubled—particularly by increased launchings in the Baltic shipyards (part of a far-reaching series of plans for the economic development of the Baltic Republics—Soviet Estonia, Latvia and Lithuania). The ten largest ports are to be expanded or reconstructed, and ship-repairing yards doubled in capacity.

These are practical illustrations of the general characterisation of the Plan given by the authors :

" This Five Year Plan is a plan for peaceful economic and cultural development. It will facilitate further consolidation and extension of economic co-operation of the Soviet Union with the countries of People's Democracy, the development of economic relations with all countries willing to extend trade on the basis of equality and mutual advantage."

ANDREW ROTHSTEIN

THE ORIGIN OF THE EARTH : RECENT HYPOTHESES

O. Schmidt

ASTRONOMY is a sector in the sharp ideological struggle between the forces of progress and reaction, between materialism and idealism, between science and religion. It is not fortuitous that of all the natural sciences it should be astronomy that has suffered particularly heavy losses in this struggle—let us recall the execution of Giordano Bruno, the trial of Galileo and his forced renunciation of propaganda and further elaboration of the materialist teachings of Copernicus, under the pressure of the Roman Catholic Church.

Like all other sciences, astronomy developed from practical needs. Astronomy was already necessary for the correct establishing of a “calendar” of various occupations among all peoples engaged in cattle-breeding and agriculture. In view of its particular importance for the organisation of production, this branch of knowledge very rapidly became a monopoly in the hands of the rising priest caste, in the hands of the church, which attempted to make use of astronomy in order to subject society to its own ecclesiastical will and rule. The creation of the earth by God, and the earth as the centre of the universe, became the fundamental dogma of the most varied religions. With the passage of centuries and the development of the productive forces of society, science came to reject these views decisively, but religion and the church, in their capacity as the weapon of the ruling class, clung stubbornly to views rooted in man’s primitive and savage past and in the social oppression of man, with the aim of obscuring the understanding of the toilers. At the present time, imperialist reaction, defending the foundations of the bourgeois order and the bourgeois philosophy, is attempting to interpret every new scientific discovery in the spirit of idealism, to “reconcile” science and religion.

The struggle between materialism and idealism is carried on with particular sharpness and persistence in questions of the origin of the earth. This problem is not merely an astronomical one. It faces geology, geochemistry, geophysics and palæogeography (the science of the changes of the earth’s surface from the earliest epochs down to our own times). Without scientific knowledge of the origin of the earth it is impossible to understand its further development, the forces active in it and their manifestation, it is impossible to understand the causes of geological phenomena (such, for example, as the formation of mountains), the laws of distribution of mineral resources, the causes of earthquakes, volcanoes and so on.

The origin of the earth is one of the knotty problems of natural science, as is that of the origin of life on earth and the origin of man.

IT IS not possible here to give a comprehensive survey of the development of man’s knowledge of the earth as a part of the universe. But it is necessary to mention at the outset the enormous revolutionary significance of the discoveries of Copernicus, which dealt the death-blow to the Ptolemaic system, paramount for many centuries until then, on which the theologians of the Christian churches depended. It is also necessary to mention the important contribution to the development of the materialist outlook on the earth and the universe made by the great Russian scholar, M. V. Lomonosov, in his thesis on the conservation of matter and motion, put forward long before Lavoisier, and in his ideas on the transformation of the earth and of nature, which formed the basis of a scientific materialist concept of the universe. Until the appearance of the hypotheses of Kant and Laplace, however, there did not exist any developed theory on the origin of the earth and the solar system.

Kant and Laplace were the first to advance scientific hypotheses attempting to give a materialist explanation of the origins of the earth and the solar system. The point of departure of these hypotheses was the thesis that the present-day solar system developed according to natural laws out of the qualitative state of matter preceding it, out of some "primal nebulae" made up of small particles, whether of gas (Laplace), or of some other substance, possibly solid (Kant). Engels greatly valued the contributions of Kant and Laplace to cosmogony—the science of the origin and development of heavenly bodies—emphasising that they were the first to shake the concept that nature had no history in time.

Proceeding from the then known facts, Kant and Laplace were able to elucidate several vital features of the solar system. But their scope was limited by the level of science at that time. Thus, Kant was unable to account for the rotation of all the planets in the same direction. Laplace avoided this difficulty by surmising that the nebulae from their very origin had rotated as a whole. According to his theory, the nebulae from which the solar system formed itself consisted of fiery gas; in cooling the nebulae contracted and thereupon gaseous rings began to separate themselves off; these later condensed into planets, the central and densest portion being transformed at the same time into the sun. But Laplace failed to observe that if such were the origin the sun would rotate rapidly, while in fact it rotates extremely slowly (once in twenty-five days). Laplace also failed to take into account the fact that gaseous rings, so far from condensing, would disperse. Many other theses in this hypothesis have also subsequently proved at variance with the facts. It is known that 98 per cent of the angular momentum* of the solar system is concentrated in the planets, whereas 99 per cent of the mass is concentrated in the sun. None of the earlier cosmogonies could explain this phenomenon. This very failure was the main reason for the rejection of the hypotheses of Kant and Laplace. Considering these hypotheses in the light of real history, however, we must not forget that they were courageous attempts, materialist in objective significance, to penetrate deeply into nature's past, attempts that contained fragments of objective and absolute truth and forming therefore an important stage in the development of our knowledge.

This is not how scientific investigation is approached by the astronomy of capitalist countries. In place of a further development of the materialist bases of the theory of Kant and Laplace in the light of the fresh knowledge attained by science, the nineteenth- and early twentieth-century astronomers merely attempted to patch up the discrepancies in the details of this theory and, when this failed, abruptly rejected it, discarding everything positive and materialist in it. The twentieth century is distinguished by the appearance in capitalist countries of large numbers of cosmogonic hypotheses each more fantastic than the other. All of them rapidly collapsed, having proved themselves bankrupt.

The hypothesis of the British astro-physical idealist Jeans persisted longer than others; according to this, at some period another star passed very close to the sun, whereupon there arose on the sun a great tidal wave and a cigar-shaped jet of burning gases was thrown off from the sun; this "cigar" then broke up into sections, forming the existing planets. The hypothesis was colourfully presented and rapidly captured popular science literature, penetrating into textbooks (including our own Soviet textbooks). But it was, however, Soviet scientists who submitted this hypothesis to systematic criticism, and in 1943 N. N. Pariisky dealt it a decisive blow, demonstrating with incontestable mathematical calculations that portions of the "cigar", even if this had been

* For a body moving in a circular orbit the angular momentum is the product of its mass times its velocity times the radius of the orbit.—Ed.

formed, could not possibly have rotated at a distance from the sun as great as that of the earth, to say nothing of the more distant planets like Jupiter and others. The Jeans hypothesis can no longer be sustained today. Where did the reason for its earlier popularity and twenty-year supremacy lie? Its scientific level was low, and no proofs of its correctness were ever adduced, but it tallied excellently with the dominant ideology of the capitalist world in that it explained the origin of the earth by an exceptionally rare occurrence—the passage of another star extremely close to the sun—so that the earth appeared as a very rare abode of life, possibly even unique in the whole universe. To clerical-idealist ideology this was more or less acceptable, inasmuch as it is impossible today to continue to maintain literally the biblical myth of the creation of the world by God out of “nothing”.

After Jeans, matters went from bad to worse in foreign bourgeois science. Typical of its latest stage are such products of the collapse of bourgeois theoretical thought as Milne's hypothesis of the origin of the entire planetary system from the sun having been struck by a quantum charged with vast energy, or the hypothesis preaching the creation of matter from nothing, put forward by Hoyle, who wrote in a book on astronomy published in Britain in 1950 that Marxism is more dangerous than the atomic bomb. Such ideological reaction goes hand in hand with political reaction.

It would be wrong, certainly, to consider the whole of cosmogonic science in the west to be nothing but idealism. The very facts studied by science, by natural science, are constantly driving scientists to materialist conclusions even against their will. For this reason valuable concepts also are to be found here and there in modern bourgeois theories of cosmogony. But these grains of scientific-progressive knowledge have to be extracted, picked out from the body of the contradictory and basically idealist outlook.

In his great work, *Materialism and Empirio-Criticism*, Lenin showed how the natural scientists, finding themselves in the grip of idealist philosophy, inevitably fall into the morass of agnosticism and preach the unknowability of the nature of things. An example of this is the cosmogonic theory of reactionary bourgeois scientists who make no real attempt to reach objective truth, to elucidate the origin of the earth scientifically, attempting merely to fabricate various methods of making it possible to do so, regardless of whether or not the theories they advance accord with reality. In the sphere of cosmogony they elaborate arbitrary subjective-idealist schemes which contradict established facts and fail to reflect reality. On the other hand, theories are disseminated as to the impossibility of resolving the cosmogonic problem in general. One of the latest books by the British astronomer Smart plainly maintains the concept that the solution of these problems lies outside the limits of science. Outside the limits of science lies religion, to which the reactionaries in science make their appeal. Hence also derives another characteristic feature of the structure of bourgeois scholarship, namely scepticism and the rejection of any general scientific theory. Instead of trying to embrace all known phenomena in one unified theory, they remain satisfied with attempting to explain one detail or another, and the contradictions inevitably arising out of such a “method” leave them undisturbed.

So does cosmogony reveal the features of the decay of bourgeois science, still capable of making fresh discoveries in its observatories or of analysing isolated phenomena, but now incapable of unifying the accumulation of scientific material into a single theory. The true heir of all preceding scientific development, capable of critically apprehending, of further developing and of synthesising its attainments, is the science based on dialectical materialism.

THE development of cosmogony in the USSR, as of other branches of natural

science, was prepared in the enduring materialist tradition which is the glory of Russian science. Interest in cosmogony sprang up at once after the victory of the great October socialist revolution. In the course of the 1920s and 1930s a great deal of work was done by Soviet scientists in reviewing critically the cosmogonic hypotheses that had at various times been advanced in capitalist countries. The first Soviet scientist to come forward with new premises in the sphere of cosmogony was Academician V. G. Fesenkov, who began his systematic cosmogonic research in the 1920s. He examined every possible solution of a number of problems connected with the origin of the earth, the planets, the stars and so on. He, and several other Soviet astronomers, have, however, declared more than once that they consider the establishment of a complete cosmogonic theory to be premature. We find this contention erroneous.

SOVIET science must fight not only the manifest idealism in reactionary science in foreign countries, but also the repercussions of its influence among ourselves. Thus, for example, in the wake of foreign authors, there was much in vogue among us a supercilious attitude towards the first classic cosmogonic hypotheses of Kant and Laplace: they were declared "speculative" (purely hypothetical), which is very much at variance with the evaluation given to these hypotheses by the founders of Marxism. Such failure to understand the role of hypotheses in the process of development of natural science has not infrequently been shown here, in spite of Engels having drawn from the whole history of the natural sciences the correct conclusion that "the form of development of natural science, in so far as it thinks, is *the hypothesis*."^{*} Many scientific theories and discoveries, of course, arise on the basis of verification of scientific hypotheses in practice and of new factual data.

Especially harmful, hindering the progress of science, was the propagation of the thesis that the time was not yet ripe for a solution of the problem of the origin of the earth, that it was necessary either to await a solution of the problem of the origin of the stars (though this is a far more difficult question) or to wait until technique should permit us to discover planetary systems in other stars and not only that of the sun.

Actually, science today, and Soviet science in particular, has already accumulated such an amount of knowledge, so many facts in astronomy, geology and other sciences, that the solution of the problem of the origin of the earth is overdue. As against the barren reactionary and idealist hypotheses and theories, Soviet scientists are creating an advanced and consistently materialist science of the origin and development of the universe, maintaining that the world is by nature material, existing in eternal movement and change, infinite in space and time. The more profoundly our scientists possess themselves of the great teachings of Marx, Engels, Lenin and Stalin, the more they learn to apply them to the actual problems of natural science, the broader grows their scientific horizon and the more boldly can they tackle the solution of the most difficult and knotty problems in science.

Stalin has called on our science to be bolder in advancing new views and discarding the outworn. In our country there is wide popular interest in the origin of the earth. The Soviet people insistently demand an answer from our scholars: how in point of fact did our earth, on which we live and work, and which we shall transform in the building of communism, originate?

Whole groups of scholars specialising in various fields are working on questions of cosmogony in our country, not only astronomers but also geophysicists, geologists, geochemists, mathematicians and so on. The task facing Soviet scientists in the sphere of cosmogony is that of profoundly re-assessing

^{*} Engels, *Dialectics of Nature*, English edition 1946, p. 158.

the scientific data on the origin of the earth, on the basis of the whole accumulation of scientific material and guided by the method of materialist dialectics.

Since 1943 a group of Soviet scientists has been gradually working out a new theory on the origin of the earth, on the initiative of the author of this article. In the course of this, sharp though comradely criticism has played a major part, helping, in the process of developing the theory, to get rid of the wrong approaches to be found in the author's earlier works. In addition to specialised scientific works, the basic premises of the theory were expounded in the pamphlet *Four Lectures on the Origin of the Earth*, the second edition of which appeared in 1950.

In 1951 the USSR Academy of Sciences convened a broad conference on questions of planetary cosmogony, in which representatives of a whole range of sciences took part—astronomers, physicists, mathematicians, geologists, geophysicists, and geochemists. The conference was a fresh illustration of the constructiveness of criticism in science, a further confirmation of Stalin's point that "no science can develop and thrive without a clash of opinion, without free criticism". More than forty scientists, specialising in various fields, spoke at the conference, examining the question of the origin of the earth from every angle, and submitting the new theory to critical analysis. The conference resolution approved the work of our group towards an explanation of the formation of the planets and their satellites from dispersed matter, and commented that the work had struck agnosticism a severe blow. The conference also commented on gaps and inadequacies in our work and gave a number of suggestions for further work in the sphere of cosmogony. The conference resolution, approved by the Presidium of the USSR Academy of Sciences, concluded with the words: "The conference calls on all astronomers, physicists, geophysicists, geologists and geochemists to intensify work on solving the problems of planetary cosmogony, and expresses its confidence that in our country, where the leadership of the Party and the Government has established every requisite for the successful development of progressive science, a solution will be found to this most difficult problem of natural science."

LET us briefly expound the basic premises of the new theory.

From what preceding state of matter did the earth and the other planets arise? This is the first question the theory has to answer. All the data on the universe accumulated by science, especially in modern times, point to the conclusion that the preceding state was a cloud of particles surrounding the sun—gas, dust and particles of larger dimensions. This swarm extended beyond the limits of the present planetary system. It rotated, but not as a unified whole, that is, not in the way Laplace maintained. Each particle rotated independently around the sun and was influenced by its attraction, in accordance with the law of universal gravitation; however, the particles moved predominantly in one direction. This conclusion follows from an attentive observation of the present solar system. It contains nine planets, from Mercury to Pluto, revolving round the sun in the same direction in their virtually circular orbits set almost in one plane. The solar system also contains smaller bodies—asteroids, comets and meteorites. These, too, circle round the sun, but in extended orbits (ellipses) in various planes; several of them, moreover, revolve in the opposite direction to the planets.

Remarking on this difference, earlier cosmogonic hypotheses concluded that each group of bodies (i.e. planets, comets, etc.) had a separate origin. But this conclusion is mistaken. The method of explaining the phenomena of the solar system without reference to its own inter-relations is metaphysical and worthless. Our theory postulates the presence of a unitary process of develop-

ment for all the said bodies in the solar system—unitary, but existing in various conditions and therefore giving rise not only to a general resemblance but also to particular differences.

We would point out that the largest bodies, the planets, have almost circular orbits; moreover, the more massive a planet, the more nearly circular is its orbit (the most nearly circular of all orbits is that of the most massive of the planets, Jupiter). Hence the conclusion that all the bodies of the solar system arose by way of the amalgamation of many bodies formerly rotating independently round the sun in various orbits, including greatly extended ones. On the amalgamation of the particles, their movements naturally “centred” themselves; from movements stretching out in different directions there could only come orbits more or less symmetrical, that is, approaching the circular. This explains the circular orbits of the planets. It is this same “centring” of the individual motions of the particles that causes the planets formed from them to move all in the same direction and virtually in the same plane.

The formation from small bodies also explains the remarkable difference between two groups of planets: the four planets set near the sun, relatively small but having considerable density, Mercury, Venus, Earth and Mars (the largest of these being the earth); and the four further planets, far more massive but of small density, Jupiter, Saturn, Uranus and Neptune.

For the explanation of this, let us turn to the chemical and physical composition of the particles of the pre-planetary swarm. In the last twenty years a great deal has been done by astronomers in the USSR and in other countries on the study of nebulae and the matter in interstellar space in general. It has become apparent that there is in space, in addition to the stars, a considerable amount of dispersed matter, most usually gathered into extended clouds. These clouds consist of gases and dust; hydrogen predominates among their gases, and then other light elements such as oxygen, carbon and nitrogen. There are also compounds of these, such as methane (marsh gas) and others. The heavy particles (dust specks) contain various elements and compounds. There is no basis for supposing that the composition of the preplanetary swarm was substantially different from that of this interstellar matter.

For a number of reasons, the quantity of matter in the part of the swarm near the sun gradually decreased. Chief among these reasons is the following: Some particles, moving in extended orbits, fell within the atmosphere of the sun and were there vaporised. Water (ice) was vaporised from other particles in the vicinity of the sun, as were all volatile substances in general, such as methane, ammonia, carbon dioxide. As has been shown by the researches of A. I. Lebedinsky and L. E. Gurevich, at the distance between the sun and the orbit of Jupiter, gases were so much heated by the sun that they took on a rapid motion and spread throughout the swarm; but beyond the orbit of Jupiter the particles lay in the shadow of the nearer part of the swarm, so that a lower temperature prevailed, and the gases not only were not vaporised, but, on the contrary, froze to the surfaces of the heavy particles. It is for these reasons that in the region of the nearer planets there is only a small amount of matter, which settled only in relatively small planets, including the earth, while from Jupiter onwards giant planets have formed. Moreover, the earth and its neighbouring planets predominantly consist of refractory substances of considerable density, while the further planets contain a great quantity of light substances.

By this example we see that the new theory, distinct from those preceding it, does not confine itself to the mechanical aspect of the phenomena of the planetary system (the movement of bodies), but draws for the explanation of these phenomena on physics, chemistry, mechanics, geology and other sciences.

The study of the evolution of the gas-dust swarm makes it possible to

explain also other, more subtle, phenomena not susceptible of explanation by the former hypotheses. Let us, for instance, examine the phenomena of the rotation of the planets on their axes (the daily rotation). The hypothesis of Laplace and others led to the paradoxical conclusion that the planets ought not to rotate in the direction they actually take, but in the opposite direction. Our work has made it clear that Laplace's error arose from his not having studied the conversion of a part of the energy of motion (kinetic energy) into heat energy. In fact, the particles of the swarm, during the process of gradual amalgamation, frequently collided, sometimes broke up, and united again. As we know, whenever heavy particles (as distinct from gases) collide, a portion of energy is transformed into heat, which radiates and disperses in space. Calculate the mathematical loss of energy, balance out in full all the kinds of energy and the angular momentum, and it is apparent that given losses of energy into heat of sufficient magnitude there will be precisely such a rotation of planets as does in reality exist.

The transition of a portion of energy into a non-mechanical form is shown not only in this fact, but is in general, according to our theory, the motive force of evolution. Once again the genius of Engels foresaw that "the life process of a solar system presents itself as an interplay of attraction and repulsion, in which attraction gradually more and more gets the upper hand, owing to repulsion being radiated into space in the form of heat and thus more and more becoming lost to the system" (*Dialectics of Nature*, English edn., 1946, pp. 40, 41).

Our theory also explains the formation of planetary satellites, the regularity of the distances of the planets from the sun, and a number of other phenomena.

Thus, Soviet science is in a position, from a single point of departure, to explain the basic features of the structure of the solar system and the origin of the planets and other bodies in the solar system from the gas-dust swarm that once surrounded the sun. A further task is to explain whence and how the pre-planetary swarm arose. The author of this article has put forward the hypothesis that the preplanetary swarm was formed by way of the capture by the sun of part of one of the gaseous clouds abounding in our stellar system (the Milky Way). G. F. Khilm and I have developed the theory of capture and have shown that in certain circumstances capture is in fact happening. The capture hypothesis is vouched for by the fact that it permits of an explanation, in accordance with the data of present-day science, of the extensiveness of the planetary system and the existence of a prevailing direction in the movement of its components. There is, however, the other point of view, namely that matter separated off from the sun.

All Soviet cosmogonists agree on the fact that the conditions for the appearance of the swarm (whether by way of capture or otherwise) were most favourable at the time when the sun itself was formed. On this, the above-mentioned resolution said that "at this stage the question of the role of capture awaits further investigation". The problem of the origin of the stars, including the sun, still awaits a solution also. Soviet scientists have already drawn near this. The idea of V. A. Ambartsumian that the stars are formed in groups, that the star-formation process is going on even now, may be accepted as the basis of the materialist theory of the origin of the stars.

HAVING given a general outline of the new theory of the origin of the planets, let us now turn to our earth, the planet that naturally interests us most of all. How did the growth of the earth from small particles proceed? How long did this process last? What was the earth like in the beginning, and how did it develop further? How does its history affect its present composition?

Meteorites are still falling on the earth now ; smaller, or less durable, meteoric bodies are disintegrating and vaporising in the atmosphere, without reaching the earth's surface, presenting the familiar spectacle of " shooting stars ". Here we have the last manifestations of the process of the constitution and growth of the earth, but by now greatly enfeebled, the greater part of the swarm of small bodies having already succeeded in becoming absorbed into the planets. This process formerly went on far more intensively ; the earth was incessantly bombarded by large and small meteorites and became covered with dust. The course of this process can be mathematically calculated, and the time elapsing since its beginning determined, that is to say, the age of the earth established. According to my calculations, it is approximately equivalent to six or seven thousand million years. An " astronomical " age of this order tallies with the " geological " age of the strata of the earth's crust revealed through the products of the breakdown of radio-active substances. The age of the earth's crust, as revealed by this method, is about three or four thousand million years ; it is natural that the crust should be younger than the earth as a whole.

The question of the original temperature of the earth is most important. According to our theory, particles fall on the earth with the same temperature that they have received from the heat of the sun's rays. This temperature is well known—on an average, about zero centigrade. The impact of the particles on the earth produces, of course, some local heating, but this heat rapidly disperses into space and does not raise the temperature of the earth much. Thus, the earth began its existence as a *cold* body.

But in meteoric particles there are, among other substances, radio-active elements also (uranium, thorium and others). These give off heat incessantly. In small particles this heat cannot accumulate, and is incessantly dispersed. But in the earth, as soon as this had attained a sufficient magnitude, the heat from radio-active disintegration began to accumulate in the interior parts, the earth being a bad conductor of heat, and the escape of heat from the interior parts outwards goes on extremely slowly. In this way the earth, starting from a cold state, gradually generated heat.

It must be mentioned that on the surface, where we live, this heat of the earth is scarcely felt, our surrounding temperature being wholly governed by the sun ; but in mines, for instance, the temperature is noticeably higher, and the deeper they go the higher it is. In the interior parts of the earth the temperature reaches thousands of degrees. We are at present engaged on an exact assessment of the course of the generation of heat by the earth. Radio-active substances disintegrate slowly but incessantly, and therefore their quantity dwindles all the time, and the total reserve of energy remaining, capable of being transformed into heat, is limited. In the deepest parts, near the centre of the earth, heat generation is apparently still going on, but near the surface the temperature has already passed its maximum and is now slowly falling. In various parts of the earth's crust, where more radio-active substances have accumulated, the heat generation reaches the melting point of rocky strata (1,000—1,300 degrees), so that magma is formed and is sometimes poured out through the craters of volcanoes. But this is a localised phenomenon.

On this point the new theory differs sharply from the view hitherto predominant in geology that the earth was originally fiery, or even flaming-liquid, and gradually cooled down and crusted over ; this view was based on the Kant—Laplace hypothesis, according to which the earth was at first in a gaseous and liquid state.

In the last century volcanic phenomena were considered a confirmation of the liquid state of the centre of the earth. But further and more exact observations have given different results : we now know quite exactly that seismic

waves from subterranean (sometimes very deep) earthquake centres travel through the earth as through a solid and not as through a liquid body, with the exception, it may be, of the very deepest level, where on account of the very great pressure (millions of atmospheres) substance takes on new properties and cannot be considered either solid or liquid in the usual sense. There are other geophysical observations also which rebut the premise of the original flaming-liquid state of the earth. The discovery made at the beginning of this century of an observable content of radio-active elements in all rocky strata showed the true source of the earth's inner heat.

Nevertheless, the expounding of the flaming-liquid original state of the earth continues to have a firm hold. We have been used to it ever since we sat on school benches; it is hard to shake it off. But in the meantime the data of geology itself have also come into contradiction with this view. The outstanding geochemist, Academician V. I. Vernadsky, stood out for a "cold" earth all his life, on the basis of geological and geochemical data. Various noteworthy scholars, for example the geographer, Academician L. S. Berg, supported Vernadsky on this question, but his views penetrated to geologists in general extremely slowly. Our theory affords cosmogonic confirmation of the correctness of V. I. Vernadsky's standpoint.

During the period of the gradual growth of the earth, its internal development was already going on. The substance of the earth accumulated, as we have said above, from a swarm of particles varying in composition (and that of the meteorites of today varies also, from iron to stone) and in density. In the beginning all these different parts and agglomerations accumulated in turn, so that on an average the composition of the earth was identical at any given depth. But as soon as the temperature in the depths reached a few hundred degrees (at such a temperature substances become more plastic) stratification began, a differentiation of the substance of the earth under the influence of the force of gravity: the lighter parts rose to the surface, the heavier sank into the centre. Thus the lighter substance of the earth's crust gradually accumulated near the surface. Simultaneously there went on chemical processes of the interaction of different substances, and rocky strata occurred.

Stratification of substances under the influence of the force of gravity is a very slow process, as great pressure and great viscosity impede it. This process has not even yet been completed. Even today there are in the bowels of the earth piles of lighter and heavier substances side by side. Their differences in density create forces pushing the agglomerations of lighter substances upwards. In consequence of the great friction these forces do not always produce movement immediately. For a long while tension accumulates, and then, having reached its limit, is released in a spasm leading to a sudden shifting of certain agglomerations in relation to others. We feel the sudden jolt within the earth as an earthquake. Thus our theory explains deep-focused earthquakes. The shifting of individual parts of the earth in relation to others under the aggregate influence of the forces of gravity, and variation in temperatures, occurs near the surface of the earth also. This process has not yet been adequately investigated.

Previous geological theories, based on the old cosmogonic theories, sought the cause of mountain formation in the cooling of the earth, which, so it was suggested, caused its crust to wrinkle up into folds. The actual regularities, now well understood, revealed by the geological formation of mountain areas and their remains, do not support this primitive presentation. A great number of hypotheses have been put forward which attempt to overcome the contradiction, not one of which, however, has received general recognition. Leading scientists advance local differences in the giving-off of radio-active heat in explanation of mountain-formation. Our theory adds further the operation of

heat generation by the whole earth and the operation of stratification on account of the forces of gravity.

It is, of course, for the geologists themselves to solve the problems of mountain-formation. But the cosmogony of today can help them by throwing light on the original state of the earth; the pre-geological history of the earth is bound up with the geological, which covers the last two thousand million years. The cosmogonic theory in itself seems to have no immediate practical or productive significance. In point of fact, it can be of practical service to us in aiding geologists in the building up of correct geological theories on the basis of which geological investigations for the discovery of mineral resources are being developed in practice.

The formation of the seas and of the atmosphere also forms part of the problems of the origin and development of the earth. In some meteorites today there is water. A particularly large amount of water (ice) was in those small bodies that moved in extended orbits and passed the greater part of their time far from the sun; we mention these above in speaking of the chemical composition of the planets. A certain quantity of such bodies, drawing nearer to the sun and not yet at the point of heating and melting or vaporising, fell on the earth and there gave off their water and other light substances (methane, ammonia, carbon dioxide), and this gave rise to the earth's atmosphere and to the water on its surface.

For an explanation of the origin of life it is most important that even in the very earliest times of the earth it had an atmosphere and water, in which water from the very beginning there were in solution carbon compounds of a very simple kind such as methane. The most convincing and thorough hypothesis of the origin of life on the earth is that of Academician A. I. Oparin. According to this, life arose in the process of the gradual increase in complexity of the chemical compounds of carbon and hydrogen in solution in the water on the earth's surface. On this question too the new cosmogonic theory can be of a certain use; it maintains that methane and other very simple hydrocarbons were to be found in water from the very beginning, so that life may have already arisen on the earth at a very distant epoch and then have developed in the course of several thousand million years, giving an astonishing multiplicity of ever more complex and perfect forms.

EXPLAINING by a single theory all the main features of the solar system gives us confidence that this theory is on the right track. The new theory has refuted the opinions disseminated by idealist philosophers as to the insolubility of this problem at the present time. But our theory is still far from completion. There are gaps and inadequacies in it, a good many of its premises need further checking and verifying; there still remains a very great deal of work on the application of cosmogonic conclusions in the sphere of geology and geophysics.

Translated by MARTIN LANE.

Slightly abridged from BOLSHEVIK No. 5, 1922.

(See note on author, p. 44.)

The Prince of Scholars

AVICENNA

Abu Ali Ibn-Sina

On the 1000th anniversary of his birth

1

S. Ulug-Zade

From ZNAMYA, 1952, No. 5

A GREAT doctor, whose equal was not to be found either in the Mohammedan East or in the Europe of his time, a mighty philosopher and investigator of nature, Ibn-Sina was also learned in mathematics, zoology, geology and astronomy. He was a notable poet and writer, whose works left a distinctive mark on Tadjik and Iranian literature and helped to bring forth the creative activity of such world-renowned writers as Omar Khayyam, Nosir Khisrav, Jalaeddin Rumi and Abdurrahman Jami. Ibn-Sina was one of those titans of human thought whose achievements are a source of inspiration for ever to those who come after.

##

ABU ALI IBN-SINA was born in the village of Afshan, near Bukhara. His father, a tax collector in the service of the Samanid monarch, was a man not without knowledge, who did not grudge the means for his son's education. In Bukhara, the brilliant capital of the Samanid state, famed for its scholars and poets, its schools and libraries, Ibn-Sina spent ten years studying the Koran and mastering the Arabic language. Then he went on to study philosophy, logic and mathematics. Those around him were amazed at the rapid progress the boy made in these sciences, and at his exceptional mastery. He was particularly attracted to medicine. By the age of eighteen he had solidly mastered the fundamentals of this subject, but continued to study it, interrupting his studies only for practical work as a doctor.

The renown of the remarkable young doctor spread through Bukhara. He was summoned to the palace to treat the Emir Nukh bin-Mansur, who was gravely ill. Ibn-Sina cured the Emir, and for reward was given permission to use the palace library.

The young scholar began intensive studies. When working at night, he used a herbal extract of his own discovery to keep himself awake. He studied many hundreds of works by ancient scholars and by Tadjik, Persian and Arab authors, on philosophy, on natural science, on astronomy, on mathematics and on medicine. He stored up the knowledge thus acquired in his remarkable memory, and it served him in good stead many years later when, on his travels, he was able to write his learned treatises without reference to sources.

Ibn-Sina's scientific work was carried out mainly in the Iranian cities of Gurgan, Hamadan and Isfahan. His formation as a scholar and as a poet was accomplished, however, in his native land, in Central Asia.

Samanid Bukhara and Urgench were mighty centres of culture and science in the Mohammedan East of those days. Many scholars dwelt there. In the book markets both the works of Aristotle and the poems of Rudaki were to be bought. Thus, the book of the philosopher Farabi, which Ibn-Sina bought in the Bukhara book market, helped him to understand Aristotle's *Metaphysics*.

The Samanid state, lacking support among the peasantry and torn by struggles between the feudal princes and the central government, collapsed under the blows of

the Karakhanid Turks. Ibn-Sina was obliged to quit Bukhara. He moved to Urgench, the capital of Khorezm. But over the city hung the menace of invasion by the hordes of the cruel Sultan Mahmud of Ghazni. The Sultan summoned the scholars assembled at Urgench (and in particular Ibn-Sina and Biruni) to come to him at Ghazni. Ibn-Sina resolutely refused to obey this summons, and with the philosopher Masikhi he fled from Urgench across the Kara-Kum desert to Iran. Masikhi perished in a sand-storm, but Ibn-Sina succeeded in reaching Gurgan.

This episode in Ibn-Sina's life shows us the scholar as a courageous man preferring hardships and deprivations and wanderings in a strange land rather than a despot's gilded cage.

Mahmud's spies, with the portrait of "The Prince of Scholars" in their hands, roved through the cities of Iran in search of the fugitive. Indeed, Ibn-Sina was in hiding from his mighty pursuer throughout the last thirty years of his life, migrating from one city to another.

During this period he became the Vizier of Shams-uds-Daula, the ruler of Hamadan, whose successor, however, imprisoned the scholar in a fortress, accusing him of secret communication with the ruler of Isfahan.

Ibn-Sina made use of his four-month incarceration to complete the section on Logic in his celebrated *Book of Recovery*. It was also at this time that he began work on his *Canon of Medical Science*.

#

MEDICINE was one of the most ancient sciences of the East. Ibn-Sina had some outstanding forerunners. Suffice it to mention the famous doctor of the Bagdad hospital, Abu-Bekr-Razi (died 923); the Egyptian Jew, Isaac Israeli (died fifty years before Ibn-Sina's birth); the tenth-century Iranian doctor, Ali-Ibn-Abbas: Ibn-Sina knew well not only their works but those of Hippocrates and Galen, and also the foundations of Indian medicine.

His immortal *Canon*, which included the achievements of Central Asian, Iranian and Arab medicine, was not, however, a mere restating of the already-known. In the *Canon* Ibn-Sina carried out a further development, practical and theoretical, of the ideas of his predecessors, and dealt with a number of important propositions in a new way.

How extensive and well-grounded was this unparalleled work by the Bukharan genius is shown by the summary of its contents given by A. V. Borisov:

The *Canon* consists of five books.

Book 1: Definition of medicine; the doctrine of elements and temperaments; a detailed description of the human body (descriptive anatomy)—bones, joints, muscles, ligatures, sinews, blood vessels, arteries and veins; the forces of the organism—"natural", "animal", and "spiritual"—and the actions produced by them; "simple" and "complex" diseases and their sub-divisions; the causes that preserve the body in health or lead it into various forms of sickness (atmospheric, meteorological and climatic conditions, where people live, what they eat, and so on); the symptoms accompanying various morbid states; the pulses and their connection with sex, age, temperament, time of year, climate and so on; the causes of health and of the inevitability of death; the regimens necessary to maintain and consolidate health, from birth to old age; details on all the conditions for the preservation of health—food, nourishment, clothes, sleep, hygiene (one chapter on baths and problems connected with them) and so on—and on physical exercises, including wrestling, boxing, rapid walking, archery, horseriding; physical exercises necessary in old age; the appropriate way of life for people with abnormal temperament, that is those who are excessively hot or cold or fat or thin; how people should conduct themselves according to the time of year, when travelling in the desert or on the sea, and so on; fundamental principles of the treatment of general diseases.

Book 2: "Simple" curative preparations and their composition; how to recognise the curative powers of "simple" preparations by experience and by logical deduction; how to estimate the action of these powers, and so on; a list of 785 names of vegetable, animal, and mineral preparations; a definition and a characterisation of the nature of each.

Book 3: "Partial" diseases, which affect not the whole organism but only particular parts of it; diseases of the head and brain; mental ailments, for example impaired memory and imagination, melancholy, excessive sexual desire, brain injuries causing dizziness, epilepsy, and so on; nerve diseases; diseases of the eyes, ears, nose, mouth, tongue, teeth, gums and lips, throat, lungs, chest, heart,

breasts, stomach, liver, gall-bladder, spleen, intestines, kidneys, genitals, bladder—each of these organs considered anatomically in detail; “external” diseases, that is those apparent to the eye.

Book 4: Teaching on diseases which are not limited in their effect to one particular member; fevers, abscesses, tumours; surgical ailments—wounds, fractures, bone-displacements, and so on; various kinds of poisoning; diseases of the hair and the skin.

Book 5: On “complex” curative preparations, that is medicines which are not encountered ready-made in nature but have to be prepared by doctors from various simple elements; theoretical consideration of the principles of making up complex medical preparations; a long list of medical preparations; indication of their composition and curative properties.”

And this is far from being a complete survey of the questions dealt with in the *Canon*.

##

IBN-SINA also left very valuable works on the other then-existent sciences. A mere list of his principal works on medicine, philosophy, natural science, philology, music, poetics, and other branches of learning, occupies seven pages of small handwriting, unparagraphed.

The historical conditions of the eleventh century in the Mohammedan East, and the circumstances of Ibn-Sina's own life, were not favourable to the scholar's work. In spite of all adversities, nowhere did he for a single day cease his studies. He had early developed an extraordinary capacity for work. He began writing at daybreak; the morning hours were allotted to receiving the sick; then he read lectures to his pupils; in the evenings he again applied himself to his scientific writings. On days free from other business he used to write fifty pages a day. A group of scholars from Shiraz once sent him written questions on one of his works; he wrote his replies—which form a thirty-page pamphlet—in one night and sent them off to Shiraz the following morning by the waiting messenger.

Ibn-Sina's philosophical works are the famous *Kitab-ush-Shifo* (*Book of Recovery*) and *Donishnoma* (*Book of Knowledge*), written in Tadjik. These are encyclopedic works, and include treatises on logic, natural science, mathematics and astronomy, as well as philosophy. With his celebrated *Al-Konun-fi't-Tibb* (*Canon of Medical Science*), they won Ibn-Sina the title of *Sheikh-ur-Rais* (*Prince of Scholars*), by which he was known in every country where Arabic and Persian were understood.

##

IBN-SINA's ideas on the eternity of the universe and on causal regularity in nature were subjected to bitter attacks from all the Mohammedan theologians, particularly the theosopher Al-Gazali. Ibn-Sina was cursed as a heretic. The scholar replied with this verse:

*Along with these know-nothings who from their excess of ignorance
Believe themselves to be the world's most learned men
Be a donkey.
For nowadays there are so many donkeys about
That anyone who does not look like a donkey
Must be a heretic.*

Ibn Sina's scientific and literary legacy has still been extraordinarily little studied. His scientific and philosophical terminology alone (in the Tadjik language) could serve as a theme for a major dissertation: the great doctor and philosopher was also a distinguished wordmaker and philologist. His philosophical works are indisputably important. But it was the *Canon of Medical Science* that brought him real world renown. Translated into Latin and Hebrew as early as the twelfth century, and published in more than thirty editions in the following century, the *Canon* became a guide for doctors and for all the schools of medicine in Europe, and remained so for six centuries. The most difficult disputes in medicine and doctoring were settled by reference to the *Canon*. Ibn-Sina's authority was beyond question. The fame of the *Canon* was so great that when printing was invented the first books printed in fifteenth-century Europe were the Bible and Avicenna's *Canon*.

##

BUKHARA of the tenth and eleventh centuries was a great centre of Tadjik science and culture. Khorezm, birthplace of Biruni, Ibn-Sina's contemporary, was then a great centre of the ancient and indigenous culture of the Khorezmians, ancestors of the Uzbek people. True, they wrote their learned works in Arabic, but this was at that time the language of science throughout the Mohammedan East. Ibn-Sina often broke

with tradition in this matter and expressed his thoughts in his native Tadjik language, which he loved dearly. He wrote not only his remarkable *rubai* (epigrams) in Tadjik, but also such a notable work as the *Donishnoma* and some other scientific treatises.

None of the Central Asian scholars of the tenth and eleventh centuries were indebted to Arab culture for their "emergence"; but Arab culture was indebted to them for many of its achievements, for the creators of this culture, who in feudal and bourgeois tradition are called "Arabs", were to a great extent scholars from other peoples of the Caliphate—the Tadjik Ibn-Sina, the Khorezmian Biruni, the Central-Asian Turk Al-Farabi, and so on.

There are in history few cultural, scientific or artistic workers whose successors commemorate them on their thousandth anniversary. In his own lifetime Ibn-Sina enjoyed great renown among the peoples of Central Asia, Khorasan and Iran. Ten centuries have not obliterated his memory from the mind of the peoples. In his own country—in present-day Uzbekistan and Tadjikistan—you will hardly find a grown-up person who does not know of Abu Ali Ibn-Sina. Folk legends were composed about the great healer and sage while he was still alive, and they survive to this day in Central Asia; some of them are included by Sadriddin Aini, President of the Academy of Sciences of the Tadjik SSR, in his book *Sheikh-ur-Rais (Prince of Scholars)*.

In 1949 I went with Sadriddin Aini to Bukhara to clear up the question of which particular village was the "Afshan" where his great countryman was born. In the villages of the Ramitan, Gizhduvan and other districts, Aini conversed with scores of collective farmers and asked them whether they had heard of Abu Ali Ibn-Sina. We did not meet a single person who had not.

An old collective farmer named Odinaev assured us that the village of Zirak was the Afshan of olden times. We went to Zirak. Our car pulled up on the bank of an irrigation canal flowing through the middle of the village. A girl came out from the nearest gate, carrying a pitcher and a porcelain cup. The pitcher contained *airan* (sour milk), which she offered, as is the hospitable custom, to each of the visitors to slake his thirst. Aini said to her: "Have you heard of Abu Ali Ibn-Sina?" Not without surprise, she answered: "All of us know about him here." And as though to confirm her words she recited in the Tadjik language one of Ibn-Sina's *rubai*:

*"From the nether world to the zenith of Saturn
I have solved all the problems of the universe;
I have thrown off the shackles of all lies and deceit;
All knots I have untied, save only one, the knot of death."*

*Abridged.
Translated by BRIAN PEARCE.*

2

L. Klimovich

From SOVIET LITERATURE, 1952, No. 8

THE work of Avicenna ranks among those creative achievements which have enriched the culture of the whole world. His name still lives in the minds of the people. In Bukhara to this day legends about his achievements as a doctor and a scientist are often referred to in ordinary conversation.

According to one of these legends Avicenna prepared forty ointments which, if used in a certain sequence, would bring the dead back to life. Before his own death he instructed one of his pupils how to apply these ointments. After Avicenna died the pupil set to work. Not only did the body of Avicenna not decay, it grew more young-looking with each application of ointment. When it remained only to apply the fortieth ointment the body resembled that of a handsome youth, seemingly asleep, yet ready at any moment to awake and speak. This so astounded the pupil that he let fall the vessel containing the wonderful mixture. The vessel broke in pieces and the will of the teacher remained unfulfilled.

This poetic legend expressed the people's faith in Avicenna's knowledge and his power to delve into the secrets of nature.

Avicenna possessed an encyclopedic mind. He was deeply versed in Aristotle and other great thinkers among the ancients, and in his works developed the progressive, materialist elements of their teaching. The classification of the sciences contained in Avicenna's works is basically materialist. His poetry breathes the spirit of freedom and a lofty humanism. His *Canon of Medicine* was of immense importance for the develop-

ment of science, and as late as the seventeenth century it had a dominating influence not only in the countries of the East but also in the medical faculties of Montpellier, Paris and Leiden. It was for long the best store of medical knowledge, passing on all the most valuable discoveries in this field that had been made before Avicenna, as well as the rich results of his own investigations.

In his works on medicine and the natural sciences Avicenna developed the teaching of Hippocrates, Galen and other ancient scholars (including, possibly, those of India), and also gave a general interpretation of the results of his own investigations and observations.

Avicenna rebelled against astrology, recognising it as anti-scientific. In his investigations concerning the origin of mountains and the fossils to be found on them, he arrived at conclusions which were extraordinarily daring for his time.

"There could exist two causes of the formation of mountains," wrote Avicenna. "Some mountains could be formed by the raising of the earth's crust as a result of severe earthquakes; others by the action of waters which, when seeking new courses, cut valleys through strata of varying firmnesses. Then the winds and waters eroded some of these strata and left others untouched. Most of the mountainous regions of the earth have been formed in this way."

Avicenna showed amazing boldness in some of the other opinions he expressed. For instance, when in Nishapur, he waged a scientific controversy concerning the laws of falling bodies—the problem that Newton solved more than six hundred years later!

For the first time in the history of science Avicenna advanced the theory that diseases could be water-borne by organisms so small that they are invisible to the human eye. His assertion that diseases could also be airborne showed that Avicenna came near to understanding microbial infection.

As for internal diseases, Avicenna was the first to define pleurisy and he made many new advances in the study of jaundice and other illnesses. In his teaching he dealt with the connection in pathology between the brain and other organs; he explored the psychophysiology of sensation, and formulated laws concerning the development of ideas. The psychological teachings in many of Avicenna's works show him to be a scientist who, in this field also, held materialist views.

Both as a philosopher and a doctor, Avicenna was above the ritual and conventions of Islam. For instance, when describing the surgical treatment of fistulas, he suggested using pig bristle for suturing instead of linen thread, considering the former more suitable although its use was forbidden to Mohammedans. Avicenna placed concern for man and his health higher than Mohammedan law and convention.

In the field of pharmacology, the study of medicinal plants, and botany, Avicenna's works won great fame. It is only fitting that scientists have named certain plants in honour of Avicenna.

Avicenna also wrote works devoted to the problems of music, which he, in accord with Pythagoras, classed among the mathematical sciences. Authors of treatises on Eastern music repeatedly refer to Avicenna as an authority whose propositions must be respected.

In furthering the development of philosophy, the natural sciences, medicine, art and literature, Avicenna's work has been of immense importance. In the early Middle Ages many of the scientist's works reached various countries of the East and of Europe, and had considerable influence on the development of both European and Eastern philosophical thought. Avicenna's writings made known some of the propositions of Aristotle, whose original works were not then everywhere available. In the twelfth century Avicenna's works began to be translated into the European languages and were among the first printed books.

The philosophical works of Avicenna, such as his *Book of Knowledge*, which he wrote in his native Tadjik language, still retain great significance.

The *Canon of Medicine*, the *Book of Healing* and some of Avicenna's other works were written in Arabic, which was then the acknowledged language for scientific writings. That, however, gives no ground for associating Avicenna with "Arab science," "Arab medicine," and so on, as some bourgeois scientists are in the habit of doing.

Many are the legends of Avicenna's life and deeds that are told, especially in Central Asia and countries of the East. The Tatar translation of one of these called *Abu-Ali Ibn-Sina, Prince of Scholars*, which was made at the end of the 19th century by the outstanding Tatar scientist, Kayum Nasiri, had widespread fame.

In 1914, under Tsarist rule and in conditions of national oppression, the progressive

satirical journal, *Molla Nasreddin*, published in Tiflis (now Tbilisi) in the Azerbaijanian language, came out in defence of the memory of Avicenna. The magazine published a caricature called *Memorial on the Grave of Avicenna in Hamadan*, which expressed the indignation of progressive public opinion at the barbaric attitude adopted in Iran under the rule of the Shahs towards the memory of the great encyclopedist.

In the Soviet Union the study of Avicenna's works is a matter of scientific research. The USSR Academy of Sciences and the Tadzhik and Uzbek Academies of Sciences are doing much work in this sphere. The President of the Tadzhik Academy of Sciences, Sadriddin Aini, has published a number of research works on Avicenna.

Soviet people place great value on the works of Avicenna, who in the dark night of the Middle Ages fought to overcome ignorance and backwardness, who strove to understand the laws of nature and to conquer the forces of evil, who demanded justice for the people and a lightening of the burden they were forced to bear. Many scientific and cultural institutions have been named after Avicenna; among them are the State Medical Institute in Stalinabad and the Bukhara Library.

—Abridged.

3

Sadriddin Aini

From NEWS, 1952, No. 15

THE thousandth anniversary of the birth of Avicenna, as the great Tadzhik scholar and thinker Abu-Ali al-Husain ibn-Sina is known in scientific literature, is a date of cardinal significance. A remarkable researcher, physician, philosopher and poet, he was indeed one of the great men of history; with his name is associated an epoch in the development of culture and science in the East and the whole world.

In observing the thousandth anniversary of Avicenna's birth, we are not merely paying tribute to the dim past. We are recognising the great significance of his contribution to human progress.

Some newspapermen have referred to the present commemoration as the thousandth anniversary of Avicenna's death. Actually it is the anniversary of his birth. According to the Mohammedan (lunar) calendar, which begins with the year of the hegira, Avicenna was born in the year 370, which roughly coincides with A.D. 980. The Mohammedan year, however, is shorter than the Christian, and this has created a discrepancy of several decades in the course of the past ten centuries.

Volumes have been written about Avicenna in a great many languages, and all the researchers who have delved into his life and work agree that this amazingly versatile man, the continuer of the traditions of Aristotle in philosophy and Hippocrates and Galen in medicine, ranked among the greatest thinkers and writers of his time.

A physician and a vizier at the courts of feudal lords, he was also a prolific writer not only on medicine, but on mathematics, ethics, physics, philosophy, logic, and the theory of music. He is quite correctly considered one of the most erudite men in history, a man whose knowledge was of truly encyclopedic scope.

For ten centuries the genius of the thinker of Bukhara has held the attention of enlightened minds not only in the East but everywhere in the world.

Avicenna's youth was spent in Bukhara, which, besides being the capital of the vast dominions of the Samanid state, was a major cultural centre in the East. Shortly before Avicenna's time the great poet Rudaki lived there, and Firdousi, the author of the *Shah Namah*, spent some time in the city. As a pivot of learning and art, Bukhara vied even with the capital of the caliphs, Bagdad.

If we analyse the historical reasons for the eminence of tenth-century Bukhara as a scientific and cultural centre, we shall find one of the principal factors in the long period of tranquillity it enjoyed under the Samanids. Peace over a hundred years stimulated economic activity, the handicrafts thrived and so did trade. A flourishing economy could not but make for progress in thought.

A growing sense of nationhood resulting from the overthrow of alien domination provided the soil for this advance in the sphere of philosophy and the arts and sciences. Naturally enough, the great poets of the time—Rudaki, Dakiki, Firdousi and others—based their art on the legends and folk wisdom of their people and created masterpieces in Dary—the accepted language of the Samanid state. Avicenna, too, contributed much in this respect. Writing his famous *Donish Noma* (*Book of Knowledge*), which treats of logic, physics, metaphysics, astronomy, the theory of music, as

well as some other works, in that language, he created a scientific and philosophical terminology in his native tongue.

His *Canon of Medicine* is truly an encyclopedia of the healer's art which ensured his fame through the centuries. In the *Canon* he revived the ancient medicine of Hippocrates and Galen enriched by the experience accumulated through the centuries by the peoples of the East. He regarded the human being as the most precious thing of all, and for man's sake, for man's happiness and well-being, he spared neither time nor labour. The legends still current among the people testify to his skill and devotion as a physician, and to this day his wise counsel and his methods of diagnosis and treatment are held in high esteem in medical science, as is his knowledge of anatomy and physiology, which was profound indeed for his time.

One of the greatest philosophers of the early Middle Ages, Avicenna has been called the "second Aristotle." This perhaps best defines his place in the history of Eastern civilisation. His philosophical system, which insisted on strictly logical proofs of the truth of a proposition and counterposed knowledge to superstition, considerably strengthened the scientific outlook and stimulated creative thought, in spite of its inherent inconsistencies.

The eminent savant was also a talented poet who deeply influenced such titans of Tadjik and Iranian letters as Omar Khayyam and Nasir-i-Khusrau.

Avicenna's quatrains, written in his native tongue, which are superb both in content and in form, are to this day included in our anthologies and textbooks on literature.

It is regrettable that Avicenna's legacy has not been studied more thoroughly. Before the Revolution nothing was done in this direction, for prerevolutionary Tadjikistan had neither scientific centres nor personnel for such work. Now, however, systematic study of his work is carried on in the land of his birth. The Academy of Sciences of the Tadjik Soviet Socialist Republic—the youngest of all the Soviet academies—is preparing special monographs for the thousandth anniversary of Avicenna's birth.

—Abridged.

4

V. Asmus

From NOVY MIR, 1952, No. 6

IN the Middle Ages mysticism was sometimes the form in which opposition to the official religious doctrine expressed itself. Mysticism of this kind arose not only in Europe but also in the East, and this is the significance of the mystical element in the philosophy of Ibn-Sina.

Ibn-Sina's philosophical teaching, being extraordinarily abstract and complicated, is hard to present in popular form. We will try to give a brief account of its essentials.

According to Ibn-Sina's teaching, any explanation [of phenomena] must be based upon that which is common to everything that exists. Common to everything that exists are the categories "being", "thing", "singleness", and so on.

There is a general science, the subject-matter of which is not this or that particular manifestation of being, but being as such. This science is philosophy. Philosophy examines being, first as it is in itself and then that which ensues from being, the division of being into the one and the many, the general and the particular, the possible and the necessary.

The possible is that which *can* exist but exists in fact only under certain conditions in which it is engendered by a known cause. If this cause is not present, then the possible remains merely the possible and does not become a reality. But there is also the possible which, though in its nature it is only possible, in practice is rendered *necessary*, because there exists the cause that inevitably engenders it.

We can know from our experience only those objects the existence of which depends on the causes which give rise to them. These things and their causes are only possibilities. In this sense one can say that all that exists in the world is merely possible. But for anything which has the possibility of existing there must be a cause. Therefore, if only possibilities existed nothing could ever begin. Since things do actually exist, there must be a cause for their existence which is not merely possible but necessary. This necessary cause of all existing things Ibn-Sina calls God.

From this it is evident that Ibn-Sina's God is nothing but the *necessary* being, the first cause of the reality of all existing things.

Utilising these concepts of necessity, reality and possibility, Ibn-Sina worked out his teaching about the world. The world is a perpetual, successive bringing to reality of a series of existences, each of which, in itself only possible, becomes necessary by force of the cause which gives rise to it. This cause in its turn becomes necessary by force of its own cause, and so on. The world as a whole, with all the things in it, necessarily arises by the force of the single, unconditioned, necessary being.

The necessary being cannot, however, be the *immediate* basis of the possible. Since the possible is that which can be, but which also can not-be, the necessary basis for it must be not the necessary being, but *matter*. If the necessary being is the perpetual source of reality, then matter is the perpetual source of the possible.

"Everything which begins to be", says Ibn-Sina, "has a material cause . . . everything which begins to be, after having not-been, is without doubt material, since everything which is engendered must of necessity have been possible in itself before it was engendered."

The universe consists of separate or single things which constitute the subject-matter of the special sciences. But man's mind forms *general* concepts from these things, which constitute the subject-matter of the science of *logic*.

The essence of each thing is exactly the same whether one takes a single example or the general concept. For instance, the essence of a horse ("horse-ness") does not in itself depend at all on whether it is a particular horse or the general concept of any horse.

[The philosopher then describes the development, out of the self-contemplation of the necessary being, of a series of "minds" at different levels of the universe, the last of which, ruling over "the lunar sphere", gives rise to the objects of sense and to the human soul.]

The soul thinks, it compares the forms of the objects which are perceived by means of the senses, classifies them, and forms abstract concepts. Each such concept is a perception of one of the forms of thought which are continually being studied by the final mind and which enter into man's reason only if that reason is disposed and able to receive them.

In Ibn-Sina's view, our mind does not merely passively perceive, it shows an activity of its own. It forms concepts about general kinds [of objects] by way of comparison. But the basis for this comparison is always the likeness or unlikeness of the things which exist in reality.

In this teaching mysticism acquires a naturalistic tinge. Later, in the seventeenth century, Spinoza, equating God and Nature, reiterated Ibn-Sina's teaching that in nature essence coincides with existence.

This was, of course, contrary to Moslem orthodoxy, according to which God is outside the world and is the creator of everything in it and the director of everything that happens in the world.

*Abridged from Part 2 of the article.
Translated by BRIAN PEARCE.*

TRANSLATIONS AND BULLETINS

The SCR publishes a number of duplicated translations and Section Bulletins covering a wide range of subjects, at varying prices. Send a stamped addressed envelope for the current list of documents available.

ARCHÆOLOGICAL ORGANISATION IN THE USSR

V. Gordon Childe

ARCHÆOLOGY in the Soviet Union is organised, of course. Now it is said this organisation must restrict "the freedom of research" in archæology. So it is worth while right at the start to examine this common criticism. What does "freedom" mean concretely in this context? Freedom to excavate—for excavation is the archæological form of experimentation—and freedom to publish. But what freedom have you or I to excavate? No one can stop us digging in our own backyards either here or in Russia—unless in Britain our backyard happens to contain one of the relatively few sites "scheduled" under the Ancient Monument Acts. Last century of course a Greenwell was "free" to drive round the countryside with a couple of labourers and dig into a barrow every day—or at night if the farmer objected. But archæologists don't call that "excavation" today and certainly do not want it to be "free". For the standard of excavation has risen enormously. Everyone recognises that an excavation is an experiment which can never be repeated; any data not observed and recorded are irreparably lost, and the tantalising reports of a man like Greenwell warn us how much priceless information about our past has been utterly destroyed. To excavate even a barrow in a manner that will satisfy the awakened archæological conscience will be more likely to take a month than a day. It will require expensive surveying, recording and preservative equipment and a considerable period of training too. Nowadays no private individual can afford the necessary equipment. Only the State, universities or learned societies command that. So, however well qualified you are, if you want to dig a site, you must go to one of these institutions, not for permission, but for equipment, money and personnel. You will get these if you can persuade them that your project is likely to contribute to the solution of some recognised archæological problem and is more promising than other projects that are competing for always restricted resources.

The position is much the same in Russia. Of course, even in Tsarist times the Russians were rather ahead of us in restricting the activities of persons like Canon Greenwell—at least on paper. The Tsarist state did not like noblemen digging into the Scythian barrows—which often contain a lot of gold and art treasures—and selling the relics abroad or keeping them in private museums. So excavation was prohibited unless licensed by the Imperial Archæological Commission (*IAK*). Nothing, of course, could stop clandestine digging, and *IAK* was not very efficient. But it did demand formal reports on all operations and exercised some control over the disposal of the finds. After the Revolution the functions of *IAK* were transferred to the State Academy of the History of Material Culture (*GAIMK*), which in 1936 became an Institute of the *Akademia Nauk* (*IIMK*). Meanwhile free-lance excavators, rich enough themselves to finance excavations in accordance with modern standards, had disappeared in Russia as in Britain, and private learned societies had disappeared too. But national and provincial museums with independent funds continued, and some universities have archæological departments. So the would-be excavator still has some alternative sources of support for his projects.

How about publication? Here, of course, you and I are free to print anything we like provided we have the cash to buy the paper and the machinery or to hire a commercial printer to do it for us. Hardly any archæologists, however, have the requisite cash—and it would not help them if they had. For

"to publish" means to get their colleagues to read their conclusions, and we know that our colleagues are not going to read badly printed pamphlets distributed in open envelopes. In practice "publication" means publication in a recognised periodical which enjoys a regular circulation at home and abroad. That means persuading an editor or an editorial board that our article is worth printing and indeed deserves priority over other articles competing for the limited space in the periodical. In England we should have four or five possible and independent channels, in Russia only two or three—*Sovietskaya Arkheologia*, *Kratkie Soobshchennia*, and *Materialy i Issledovania* are all published by IIMK; the Hermitage, the State Historical Museum and some other Russian museums issue *Trudy*.

Still it remains true that there is more centralisation in the direction of archaeological effort in the USSR than in the UK. Here the resources requisite for any major operation are mostly controlled by two State organs—the Ministry of Works (Ancient Monuments Branch) and Royal Commissions on Ancient and Historical Monuments—or might be derived from or through some rich private society, most probably the Society of Antiquaries of London. In effect the responsibility rests either with civil servants whose primary concern must be the conservation or recording of a special class of monument committed to their care by Act of Parliament, or the officers of a society by no means all of whose members are qualified archaeologists. However well the system works in practice, it is still true that the executives concerned are not, and should not be, appointed primarily for their comprehensive knowledge and experience in archaeology, theoretical and practical, and their consequent competence to evaluate problems against a wide background. IIMK should possess precisely these qualifications; for it comprises the most competent experts in the Union and is directed by academicians, chosen, like Fellows of the British Academy's Section X, for their distinction in the subject.

The value of this direction has been shown in practice. Centralised direction was in fact peculiarly necessary in the USSR. On the one hand trained personnel was severely limited after the Revolution, on the other vast schemes of industrialisation, canal digging and dam-building involved an enormous amount of "rescue digs" such as have become familiar in Britain especially since 1939. Such works in fact involved the destruction or submergence of known monuments on a terrific scale and the exposure of unsuspected sites likewise doomed to speedy destruction. All must be surveyed, excavated and studied, and movable antiquities collected and transferred to museums. GAIMK and subsequently IIMK (with its filials in the Ukraine, Georgia and other Republics) have been able to provide teams of scientists to follow the tractors and mechanical excavators and to anticipate the rising waters of artificial lakes, and thus rescue a vast amount of information about ancient men in the territory of the USSR which would otherwise have perished. Not many of the results have yet been published, but how exciting some of them are may be judged from Kuftin's book on Trialeti (which was awarded a Stalin prize) and Tolstov's discoveries in Khoresmia, recently reviewed in this journal.* As in this country, the devastation of towns by the Nazis—on a far more terrible scale than here—has afforded opportunities for rescue digs, ahead of rebuilding, from which are resulting fascinating pictures of medieval Russian towns, far richer than anything yet achieved in London or Canterbury.

But IIMK has not devoted all its resources to the urgent calls of rescue digs. Despite the demands of the latter, planned excavation has also been directed towards the gradual solution of theoretical problems, duly evaluated as "major". Now all my colleagues in this country would agree as to the sort

* Ancient Khorezm. By William Watson. *ANGLO-SOVIET JOURNAL*. Vol. XII, No. 2 (Summer 1951).

of problem and consequently the sort of excavation that should be given first priority on purely theoretical grounds : the total excavation of domestic sites. Barrow digging and collecting have given a fairly adequate idea of the sort of tools, weapons, ornaments, pots, art styles, and so on, current in the past ; test excavations, supplementing typological analyses, have enabled us to arrange these in chronological order. Now we need to find out more about the density of population, rural economy, domestic architecture, and social organisation, and only total excavation of whole village sites can provide data relevant to that. On the other hand, that sort of excavation is a lengthy, tedious and expensive process ; it is not the least likely to yield show pieces for display in museum cases nor buildings that can be opened to the public at 6d. per head. All one can expect are broken tools, broken pots and broken animal bones.

No such excavation has yet been carried through on a prehistoric site in Britain. Soviet archaeologists, not distracted by the need for show pieces to put in museums or sensations to attract private donations, have done it more than once. As early as 1934 *GAIMK* had initiated excavations in the Tripolye village of Kolomishchina, south of Kiev. After six consecutive seasons of painstaking work, the whole neolithic village of thirty-nine houses had been excavated and planned. The results are embodied in a well-illustrated report. They did not add many new specimens to the stock of beautifully painted pottery vases which have made the Tripolye culture famous all over Europe since 1899, but they gave us the plan of the houses and the lay-out of the whole village—data from which we can estimate the total population, the character of the household unit and so on. Similar operations are in progress now on other sites.

In the USSR acceptance of centralised direction has been facilitated by agreement on fundamentals, the acceptance of Marxism as a philosophy of history which has at the same time inspired the direction. Let me remind you that Marxism does not mean a set of dogmas as to what happened in the past (such would save you the trouble of excavating to find out !), but a method of interpretation and a system of values. Marxism assigns primacy in the historical process to the means of production and the social structure within which they function. Now “ means of production ”—tools, kilns, fields and so on—inevitably constitute the bulk of the remains left at least by pre-literate societies. To Marxists these are just as significant as, indeed more significant than, the far rarer objects of (often dubious) aesthetic interest on which Tsarist archaeologists had concentrated to the virtual exclusion of everything else. Again Marxism directs attention to society as a whole, not merely to ruling classes ; so commoners’ graves and private dwellings are just as important as royal tombs, temples and palaces. Moreover, for Marxists, human history does not begin with the invention of writing. Decisive events in the historical process were enacted in the pre-literate stages of savagery and barbarism. Hence prehistoric remains are just as worthy of study as the more glamorous vestiges of the Greek colonists on the Black Sea coasts, or early Slavonic towns and churches. Finally dialectical materialism seeks to explain change as far as possible in terms of the internal development of the society under investigation.

The last point was a very salutary corrective to older trends in prehistoric archaeology, especially in Russia. Prehistorians are always tempted to explain the observed changes in the archaeological record by postulating influences or migrations from some undefined point outside their province of observation. Thus in 1905-6 Gorodtsov had postulated no less than six invasions to account for the consecutive changes in burial rites and furniture he observed in the barrows of the Pontic steppes. But when each band arrived in his field of vision from some unspecified region in Central Asia, they did nothing until the

next group invaded their territory and displaced them! In 1935 Kruglov and Podgayetsky explained the same phenomena in terms of the dialectical development of a single society without invoking migrations or even foreign influence at all. Their account drew attention to many neglected aspects in the material gathered by Gorodtsov, brought new facts to light, and was on the whole as plausible as his, but yet it errs in the opposite direction.

The fact is that these authors and many of their colleagues in the earlier years after the Revolution were more Marxist than Marx. To them Marxism came as a revelation. It seemed, for reasons already indicated, precisely the tool they needed. They embraced it with passionate enthusiasm but perhaps rather superficially. Intoxicated with the novelty of the prospect opened up, they took the generalised and schematic account of the development of savage and barbarian society by Engels as a literal description of what actually happened in any and every pre-literate society. All the prehistorian had to do was to illustrate it from the archaeological record. This did not even present concrete societies which could interact, but Society. A period of schematism lasted from 1925 to 1935, during which both migrations and also foreign influences—diffusion—were rejected as explanatory devices!

For the rejection of migrationist theories there were special but ephemeral reasons. From the beginning of this century at least, German prehistorians, led by Gustav Kossinna, had been constructing archaeological evidence for prehistoric migrations of conquering *Germanen* or *Indo-Germanen* to South Russia and the Caucasus, as a justification for the *Drang nach Osten* that culminated in the first world war. After 1933 Marxism—in the sense of anti-migrationist prehistory—became an ideological defence against Hitlerism.

Now I think we must admit that the first converts to Marxism among former bourgeois prehistorians after the Revolution were more enthusiastic than profound. Intoxicated by their success in making a superficial, literal application of Engels's scheme yield a more satisfying interpretation of archaeological data than had the old migrationist postulates, they never took the trouble to master the deeper implications of the method. This was particularly true of N. Y. Marr, who, though a linguist rather than an archaeologist, won such a dominating role in Soviet prehistory that his name was attached to *GAIMK* itself and even its successor *IIMK*, and his formulæ were till 1950 accepted as authoritative. Still, even in 1935 protests against formalism and schematism were voiced, notably in the editorial to Vol. II of *Sovietskaya Arkheologia*. The importance of "intertribal relations", indeed of diffusion, was recognised as fully as among bourgeois prehistorians.

On the other hand, as long as the Hitler menace remained migrations were looked upon with alarm. Yet Debetz had shown that one of the changes in burial ritual and furniture in South Russia, which Kruglov and Podgayetsky explained in purely evolutionary terms, had in fact been accompanied by a change in racial type that could hardly be explained without admitting the advent of a new people. Indeed the round-headed folk who were first buried in "catacomb graves" sometimes artificially deformed their skulls as if to make them resemble their long-headed predecessors in the same region! Still it was not till Stalin had debunked Marr's pseudo-Marxism that the way was clear for Soviet prehistorians to invoke migrations when they must. In the meantime, they have learnt not to use them as a means of escaping the duty of explaining observed changes in terms of the data presented by the region under study to the utmost possible limits. British prehistorians would benefit from a similar discipline.

WRITERS' DELEGATION TO THE USSR, JULY 1952

ENGLISH WRITERS IN MOSCOW

A. E. Coppard

AT the end of June, in the company of five other members of the *Authors' World Peace Appeal*, I paid a visit to Moscow for a fortnight as guest of the Union of Soviet Writers. We had no message to deliver, no mission to serve save that of goodwill; we went chiefly to discuss matters of mutual interest in the sphere of literature, but inevitably, inescapably, despite the openhanded, openhearted friendliness and hospitality of the Soviet Writers, the thought often recurred to us that after all we were in a country stigmatised by the Western press as the enemy of the entire world.

How did our impressions react to this opinion? I can tell you with certainty my own personal response because having little talent for investigation and statistics I prefer to rely on impressions derived from the many contacts we made. In a fortnight there was little time to do more than scratch at the surface of things, and what was so visibly in being or in process of being was often bewildering in its immensity of conception as well as enchanting in its scale of social beneficence. From Moscow we went to Leningrad, and Yasnaya Poliana, and we visited libraries, museums, and factories, as well as farms and camps within a day's motoring distance of Moscow. Immediate impressions of Moscow were: how wide the streets, how vast the squares, how neat and tidy; the people how courteous and orderly, the motor-cars how swift and noisy—for there is no speed limit, but woe betide those who cause an accident! For two whole days I never saw a dog, and in the whole of my stay I saw a bare half-dozen, yet I was assured that people here love dogs as they do elsewhere and that there are plenty in existence—generally big ones! Behind the “iron curtain” there is no rationing and prices continue to fall. It was soon evident that there are not yet nearly enough of the great collective shops, or *magazini*, in Moscow; they were invariably as crowded as, say, Selfridge's in Christmas week, and were often as difficult to emerge from as they had been to enter. These shops open at eleven a.m. and close at eight p.m. There is no early-closing day, they open as usual on Sundays but are closed on Mondays except in the food departments. A forty-eight-hour week is the norm for employees, except on the collective farms where the shorter winter hours offset the other seasons.

IN England we had been assured that we should see only what our hosts wished us to see, that we would not be permitted to go about unaccompanied; that Russia being a “police state” no man there could call his soul his own, and we would be dogged by spies; that objectors mysteriously disappeared or were whisked off to a concentration camp and never heard of again; that the sorely stricken populace is longing for *der Tag* when when some noble-minded nation will arrive and magnificently liberate them. However, nothing of this presented itself to us anywhere. On the contrary, we perceived astonishing efforts being made to educate and inform the people. In the streets wherever we went there was no apparent social distinction in clothes, manners or occupation. *Jude the Obscure* would have been delighted to learn that a number of the workers engaged since 1949 in constructing the new Moscow University have been able to enrol as students from the first term, which begins this autumn. Of an evening the people, young and old, flock to the parks of culture and rest, the best known to us

being Gorky Park, on the banks of the Moscow river, which has at least three theatres, several dance halls, a fairground, pleasure gardens with fountains and lakes and flowers familiar to us such as petunias, sweet williams, and zinnias. There are restaurants, orchestras for classical music or open-air dancing, and a forum for vaudeville. All is magnificently illuminated at night and joyously attended by such crowds that it is often difficult to get around. A striking feature of Moscow is the way young and old so swarm to the concerts, drama, and ballet that it is never easy for a visitor even to book a seat.

A million books are published annually by the various publishing houses. Of these the House of Children's Books is the largest in the Soviet Union. It is under the control of the Minister of Education and in 1951 issued 56,000,000 copies of books for children, embracing 457 titles. There are 34,000,000 children for whom books in Russian are published; other publishing houses provide for the children of other nationalities in the Soviet Union. Each publishing house has a director, generally appointed by the Minister for Education, and a Council of writers and publishers. Among the English books published in Russian translations we noticed *Treasure Island*, *Mowgli*, *Alice in Wonderland* and *David Copperfield*. Three to five per cent of the profits made by a publishing house must be allocated to a fund to assist and encourage budding authors.

The Lenin Library is the representative library for all Russia and contains over 40,000,000 books. It is open from 9 a.m. to 11.30 p.m. all the year round for anyone. Its many reading rooms were packed with readers. This immense institution has its own publishing house and a staff of 1,500. Its storage shelving placed on end would extend to 250 kilometres. This shelving is wooden but has been chemically treated for fire resistance. We were shown many rare editions of English books, including *Paradise Lost*, 1667, and *Dombey and Son* in the original green-covered parts. On opening the end of the latter I was amused to see an advertisement: MATTRESSES PURIFIED BY STEAM. It was from Heal and Son. Among many translations of English classics were a complete Shakespeare, 1687; *Gulliver*, 1772; *Tom Jones*, 1787; *Paradise Lost*, 1771; and *Hamlet*, 1628.

The Tolstoy domain at Yasnaya Poliana is reverently cared for and preserved by the authorities. We met his old coachman and his last secretary, visited his solitary grave in the woods, and went over his house and study. Upon his desk, just as he had left it, was a half-full bottle of Swan fountain-pen ink. Other unexpected objects were a mechanical pencil-sharpener, a mimeograph apparatus presented to him by Edison, a typewriter with the word Remington in Russian, and an old-fashioned gramophone with a large horn and some cylindrical records.



AT Leningrad we met many notable writers, among them Zoshchenko, about whose fate so many stories have been circulated. Zoshchenko is very much alive and kicking and is publishing a novel this autumn. In a speech he made at our meeting I caught and clung to one most illuminating phrase, "creative self-criticism", which in itself is significantly explicative.

Always and everywhere we saw and heard insistent exhortations on the necessity of peace, always and everywhere vast educational institutions, communal amenities, and colossal reclamation projects. One need not ask why a wide spirit of content prevails, why there is such a popular response to the finer arts. None of it lent the faintest colour to the pictures presented by the English press. This regime has existed for thirty-five years, the majority of its present population were born into it, they are happy under it, are proud of their country and its administration, and would no more tolerate oppression internal or external than would the people of Britain.

GLIMPSES OF THE SOVIET THEATRE

Doris Lessing

THE Bolshoi Theatre : crimson, gold, white ; the rich boxes ; the chandeliers—this is the decor for luxurious enjoyment ; one might be in a theatre in any of the European capitals. Yet one does not even have to enter it to know it could not be London or Paris : the crowds at the entrance are ordinary working people, in ordinary clothes. One sits among them and thinks how wonderful it is that to this theatre, built for the aristocracy of the old regime, factory workers, collective farmers, housewives, come as a matter of course for an evening's entertainment. One may have read about it, but it is quite another thing to experience it, to think that the middle-aged woman sitting next to one was probably illiterate thirty years ago.

And then the curtain goes up, and again one has to adjust one's ideas. When we arrived we were told that it was a bad time for theatres ; the most famous had closed for the summer, or were on tour. I cannot imagine what their best must be like if what we saw was their second-best.

The production of *Ivan Susanin* on the first evening in the Bolshoi was magnificent, perfect in every detail. I think that for an introduction to the Soviet theatre it could not have been better chosen, for it accustomed us to several trends that we afterwards found in all the ballets and plays we saw.

Ivan Susanin is the story of the Russian fight for national independence against the Poles. Its mood is deeply religious and patriotic. It was strange—to me, at least—to arrive in socialist Moscow and plunge straight into this atmosphere of profound piety. In the second act the scene is the Polish court, glittering and decadent ; it is ballet, a complete act in ballet, forming part of the opera. It is witty, polished, vivacious—there must have been at least 200 people on that stage, and not once was one aware of strain or muddle. So if the first point is complete fidelity to the time and mood of a work of art—no matter how apparently opposed that work of art seems to communist ideas—then the second is a magnificent handling of crowd scenes on a scale that one never or seldom sees in the West. The Soviet theatre, one realises at once, has never had to use that defence with which we are all too familiar : “We want a play with eight characters and not more than two sets ; we cannot afford to produce anything more expensive.” Or : “We will have to cut out that crowd scene ; can't pay so many actors.” To produce that second act of *Ivan Susanin*, with its surging crowds, its dancers, its musicians—how many months of rehearsal did it need ? In short, how much money it costs to achieve a standard as high as this !

In the last scene the Tsar prances on a horse between St. Basil's Church and the Kremlin, applauded by the liberated people, while the Polish prisoners pass yoked before him. One imagines the response *that* scene must have received during and after the last war. This is the third point, something that one feels immediately one arrives in the Soviet Union : a deep emotion of national unity, of pride in themselves and their achievements, a confidence for an expanding future.



ON the second evening we went to Tolstoy's *The Living Corpse* at the Maly Theatre. We have many fine actors and fine producers in Britain, but it would be impossible to see such a production here, for two reasons. The first, again, financial : a company there is a living whole with a tradition, the actors and producers work together for years. Here, actors and producers are engaged for a season or two, then move off to seek better conditions, better money, elsewhere. So there is not this feeling of cohesion in a production. And we cannot afford to rehearse a play, as they do there, for a year or even more. The second reason is the relation between the audience and the theatre, something we will not achieve here until the State assumes responsibility for culture—

that is, until the people insist that culture is not only for the few. Sitting in the Maly Theatre watching this wonderful production one thinks: "In Britain this play would be put on, if at all, for a small audience of highbrows." In the Soviet Union there are no highbrows, but everybody takes it for granted that a play like *The Living Corpse* was written for them, the ordinary people. There is an unlimited audience for plays of the highest standard—plays that would be considered here too "difficult" for the masses.



THE three ballets we saw were modern: *The Bronze Horseman* (based on a poem by Pushkin), *The Red Poppy*, and *Esmeralda*. They are all superb and colourful spectacles, they are all faithfully realistic—in *The Bronze Horseman* the waters of the Neva surge across the stage while boats and drowning men wallow in the flood, and at the end of that scene the mechanics who created it come forward to take applause for their ingenuity. They are all, too, unashamedly romantic, in a way that might be strange to those of us accustomed to the sophistication of our ballet. The mood of *The Bronze Horseman* is frankly Byronic: doomed lovers dance out their passion and despair before one is drowned and the other goes mad, while the gigantic shadow of Peter the Great plunges across the stage in a manner truly flesh-creeping. In *Esmeralda* the gipsy heroine preserves her virtue against incredible odds, the wicked priest is flung from the towers of Notre Dame by the hunchback, to the accompaniment of fervent applause by the audience. Hugo's masterpiece, set in the Middle Ages but soaked in nineteenth-century romanticism, now melts the heart of modern Moscow. *The Red Poppy* concerns a Chinese dancing girl who supports the revolution and loves a worker. She is killed by the reactionaries, but her soul, symbolised by the red poppy, continues to inspire the revolution.

The thing one has continually to remind oneself of, coming from the West where a theatrical performance is an experience for a minority, is that every major production, whether it is Gogol or *The Red Poppy*, becomes part of the consciousness of the whole people, discussed in every newspaper, factory, club, and seen by nearly everybody.



UNFORTUNATELY, we could not join an audience of six- or eight-year-olds, which everyone says is the most wonderful experience, for most of the children were in the country for the summer. But we did see adolescents enjoying a fairy tale at the Children's Theatre. It was a dreamy, charming piece, full of magic and enchantment, and—but this goes without saying by now—perfectly acted and produced.

Last, but certainly not least, the Puppet Theatre in the Park of Culture and Rest. This play was about a collective farm, a very sophisticated piece indeed. A young agronomist who has just left the university comes to the farm. She is very beautiful. Alas, all the young men fall in love with her, all the girls are in despair. One girl pathetically says that she will throw herself under a train "just like Anna Karenina". "What!" is the unsympathetic reply (or words to this effect), "and obstruct one of our Soviet trains?" The audience roars with laughter.

But I think I shall remember longest those moments at the end of ballets like *Esmeralda*, when it seemed that the whole audience was surging to the front on an irrepressible wave of emotion, laughing, crying, calling out to the dancers. Then one noticed that the older people were standing back, smiling tolerantly at the wild teenagers, while the dancers came forward smiling, again and again, taking what seemed to be interminable curtain calls.

It must be wonderful to work in the Soviet Union for this new audience, accustomed to the very best, so critical of anything second-rate, and yet so appreciative.

TALKS WITH SOVIET WRITERS

Arnold Kettle

I WAS lucky enough to be one of a party of six British writers—supporters of the Authors' World Peace Appeal—who in July 1952 visited the Soviet Union at the invitation of the Union of Soviet Writers. What follows is merely some personal impressions of one member of the party.

We received from our Soviet colleagues a welcome not less friendly than it was generous. They put themselves at our disposal with a prodigal disregard of their own time and answered our questions with the greatest frankness. Our discussions were certainly not, on either side, mealy-mouthed. To the Russians some of our party's questions must sometimes have seemed on the borderline of insult; for their part they did not hesitate, when they thought it necessary, to go on to the offensive. Neither group felt that there was anything to be gained from a smudging of controversial issues.

Some of our discussions took place in the beautiful house in Moscow which is the headquarters of the Union of Soviet Writers. It is the original house of the Rostov family in *War and Peace*. The house of the Leningrad writers, with its superb view of that city's lovely waterfront, is scarcely less impressive. Other meetings were less formal, including a wonderful day spent in a visit to Tolstoy's house at Yasnaya Polyana, a hundred and fifty miles from Moscow, a national monument kept with a combination of care and informality which we found very moving.

The material conditions of writers in the Soviet Union are obviously excellent. Editions run to enormous numbers and royalties are considerable, so that (taking the rouble as worth sixpence) a new writer will make the equivalent of from £1,000 to £3,000 on the first edition of his book (generally 15,000 copies). Ten Soviet poets have a circulation of over a million each. What we saw of the Union of Writers' houses and heard of the rest-homes in the Crimea and the Caucasus was enough to assure us that the practising writer in the Soviet Union is looked upon as a member of society deserving the highest privileges.

But it was not, of course, material conditions that we chiefly discussed. We asked about censorship, whether official or implicit, about relations between writers and the state, about freedom of criticism, and about the artistic standards and values of the Soviet writers.

Samuel Marshak, the eminent translator of Shakespeare and Burns, a literary man of pre-revolutionary days, told us, while emphasising that he was not a member of the Communist Party, that he much preferred the relations which he now had with the State publishing houses and the Union of Writers to his previous experience of commercial publishing. "You see, the relationship isn't a financial one any longer", he said. "We writers feel much more a part of the people, not isolated and 'different' the way writers used to be."

This point was taken up a hundred times in different forms. "It is only if your soul is typical of the soul of your time that you will find the common language of the people", said Alexei Surkov. "There are difficulties enough in working for the masses; but they are nothing compared with the dangers of loneliness and the isolation of the writer from the people." "We believe in personal relationships, in love and all it means", said Galina Nikolaeva, "but we don't see personal relationships in isolation. Love of our country is an important kind of love." Vera Panova insisted that though the writer must not underestimate or play down the evil in life yet ultimately he must

show that good triumphs. "That's precisely what many Western intellectuals would deny", I said. "So much the worse for them", said Vera Panova.

It seemed to me as we talked to the Soviet writers that two things in particular emerged. The first was that one should not try to approach the problems of Soviet culture in too abstract or theoretical a fashion. The basis of Soviet culture is not an abstract theory, a dogma, a wordy orthodoxy. The problem that faces the Soviet writer is—in all its simplicity and complexity—the problem of producing a truly popular literature, a literature which the people will enjoy and find satisfying. And by the people is meant not "elite", but the people themselves.

At a factory we visited, meetings were arranged about once a month in which the workers discussed particular books with their authors, giving their criticisms, saying what they liked. The average attendance at these meetings, the secretary of the trade union branch told us, was about a hundred and fifty. The House of Children's Books arranges similar meetings up and down the country between the writers of children's books and their young readers. These discussions are two-way affairs. It is not a matter of the writers explaining or lecturing on their own novels and poems, attempting, so to speak, to bring their readers up to their own level. It is a matter of achieving a unity of feeling and a fundamental sympathy between writers and readers.

I stress this perhaps obvious point because to me it was the most impressive thing I learned in my visit to the Soviet Union. It seemed to me that most discussion by Western intellectuals of "Socialist Realism", "Revolutionary Art", "Marxism and Culture", and so on, all miss the essential point, just as most discussions about the political and social set-up of the Soviet Union tend to become hopelessly abstract and theoretical. The main thing about the Soviet Union is that it is a people's country, a country in which everything is based upon and depends upon the lives and activities of the ordinary working people and all judgments, values, morals, aesthetic criteria, etc., spring from this. We are always being told that ideas and standards are *imposed on* the Soviet people from above and I think that even many people who are sympathetic to the USSR have something of this feeling. I can only say that it seems to me the absolute reverse of the truth. It is the people who impose *their* values, *their* ideas, *their* sense of necessity upon Soviet society, for, quite literally, they *are* Soviet society.

The second point that struck me time and time again was that even when there were quite substantial disagreements between many of the British and Soviet writers one felt that fundamentally we were all talking the same language. By this I mean that the values we held dear were the same, even when interpretations differed. Alexei Surkov and Boris Polevoy constantly used phrases which breathed the same spirit as Wordsworth's preface to the *Lyrical Ballads* and Shelley's *Defence of Poetry*. Wherever we went we were impressed by the standard of reading: among the children no comic-strips, no gangsters, no sadistic horrors, no glorification of force or war or brutality. One of our party noticed as she sat in the Metro that of the two passengers seated on either side of her one was reading Chekhov and the other Dostoevsky. The great figures of the past, Russian and foreign, are not merely revered but even read. "Nobody pushes me around", said Professor Norikov, of the Gorky Institute. "I love the classics and work on them. A book I recently wrote on Pushkin sold 100,000 copies."

We took the opportunity to talk at some length about the effects of the discussions and criticism among the writers themselves which are a feature of Soviet writing. I remember saying, during a conversation at Leningrad, that it seemed to me from the Soviet novels I had read in translation that perhaps the chief weakness lay in an oversimplified characterisation and a consequent lack of conflict within the books. We discussed this question fairly fully. Several of the Russians made the legitimate point that in the Soviet Union the fundamental conflicts within society have been eliminated and with them many of the psychological conflicts which bother and often obsess Western writers. A new society is producing a new man, simpler, less racked with inner division, but not less profound. But all the writers agreed that there had not yet been a fully satisfactory artistic presentation of the new man and his world. "The time in which we live is too deep and exciting for most of us as writers", said Surkov. "It needs a Shakespeare." And when we pressed some of our points someone said: "The kind of questions you are raising are precisely the sort that we discuss among ourselves."

It was interesting to hear from Zoshchenko in Leningrad the reactions of a writer who has himself been seriously criticised. We asked him whether the criticism had been useful to him or inhibiting. He replied thoughtfully and with obvious sincerity that it was difficult to say and that only when his new work appeared could a satisfactory judgment be made. He did not pretend that he had liked the experience; it had been a painful and for a time a bitter thing. But it had made him think more fundamentally than he had previously done of the responsibilities of a humorous writer and for that reason he could not resent the criticism and tried to profit by it. It was obvious that Zoshchenko himself was personally on good terms with the other Leningrad members of the Union of Soviet Writers and that, however severe the criticism of him may have been, it had not resulted in ostracism or oblivion, let alone the more sinister consequences which some British comments always, on such occasions, imply.

It is clear that in a socialist society in which publishing for profit has been abolished, the question of what does and does not get published is one which has to be decided in different ways from the one with which we are familiar. The various publishing houses and periodicals (many novels are first published, like our own nineteenth-century novels, in serial form), although independent and—in the socialist sense—competitive, are all ultimately responsible to the State and, through the State, to the people themselves. To the Western intellectual who is never called upon to take an actual decision as to what—given certain expendable resources—should or should not be published, the Soviet system immediately raises all kinds of doubts. Is there not all the time a narrow form of censorship—ideological and political? Can *anything* be published? The question is not as simple as that. One of our party asked if a book written from a Christian pacifist viewpoint would stand any chance of publication in the Soviet Union. Yes: it might well be published by the religious publishing house. But would, say, a Graham Greene novel be published? Unlikely: it is not the sort of thing Soviet people want to read or can even understand.

I think this whole question cannot be simplified into neat sentences of complacency or indignation. Can *anything*, after all, be published in Britain? Are we quite sure anyway that we want *anything* to be published, quite regardless of its value and consequences? The important questions are really: what are the standards by which literature is to be judged as suitable for publication and who is to be responsible for the actual decisions? Without going any deeper into the question it seems to me that the Soviet publishing system is, to say the least, a responsible and democratic one. That it is not perfect need surprise no one. But that it should be dismissed as in some way sinister or inimical to artistic standards is, I suggest, quite unwarrantable. Such an attitude can be due only to extreme prejudice or to a failure to think through the implications of socialism and democracy in the cultural sphere.

A democratic culture is not a culture in which the mass of the people have been “educated up” to the tastes of their betters, an assumption which is implicit in much thinking on the subject in our country. On the contrary it is a culture not merely *for* but *of* the people. This may mean the disappearance of certain types of art which are born out of the problems of a minority, but it does not mean a lowering of standards. No one who has visited the Soviet theatres could possibly imagine that artistic standards in the Soviet Union are in danger—not that there is any complacency anywhere about the quality of most of the new plays. We went, for instance, to a performance of Tolstoy's *The Living Corpse* at the Maly Theatre in Moscow. It is not a play that one can imagine being “popular” anywhere in the West, yet the audience of ordinary working-class folk was enthusiastic and enormously appreciative. And well they might be. I have never anywhere seen acting or production of so high a standard. The whole thing made even a superior Old Vic production seem rather amateurish—or, rather, a bit too professional; for what struck one was the combination of supreme technical excellence with a complete absence of slickness. Audiences who are being brought up on productions of such quality cannot possibly be in danger of not knowing what artistic standards are.

STANISLAVSKY'S SYSTEM IN THE CINEMA

V. Pudovkin, *People's Artist of the USSR*

THROUGHOUT the history of its development our cinematic art has always been closely linked with the great traditions of progressive Russian art to which the interests of the people were the breath of life.

Foremost in the ranks of those who continued and developed these traditions was K. S. Stanislavsky. When, together with V. I. Nemirovich-Danchenko, he created his theatre he wanted to call it *The People's Art Theatre*, and it was only on account of the difficulties which tsarist censorship made in passing plays for people's theatres that he agreed to change the name to *Everybody's Theatre* (*Obshchedostupny*), preserving thus, however, his original intention of linking art with the people. This endeavour to make art the property of the people is the key to the understanding of the principle embodied in Stanislavsky's life-work, a principle which continues to produce valuable results not only in the art of the Soviet theatre, but also in art in general and the cinematic art in particular.

Stanislavsky's aim was to create a realistic theatre. All his artistic conceptions, the whole of his intuition, were applied to breaking away from the hackneyed theatrical technique and to finding such lines for the actor's work as would always make the theatre a vivid reflection of real life. To attain this Stanislavsky began by applying the full power of his creative analysis to a careful study of the basic principles for an artist's work on his part, and on himself, in the process of creating a stage character.

Though before Stanislavsky's time others had tackled similar problems, the majority had been content either to depict personal emotions or to formulate general principles of a poetic rather than scientific character. Stanislavsky never rejected what had been done before his time, but he succeeded in showing that the achievements of exceptionally gifted individuals were merely isolated victories of outstanding talent, and not the result of a proper training of the artists. Stanislavsky's great merit lies in the fact that the results of his theatrical analysis, scrupulously verified by experiment, have produced a number of objective principles which can serve every actor and every producer as a basis for methodical and fruitful work, irrespective of their individual temperament or talent. By collecting and analysing examples of outstanding acting, Stanislavsky sought to reveal the essence and the causes of individual success and thus discover objective rules suitable for a systematic training of actors in general.

The cinema, which is closely linked both with theatrical art and with literature and the graphic arts, has naturally adopted the basic principles of Stanislavsky's school and continues to develop them successfully.

Although Stanislavsky did not directly concern himself with the cinema, in his theatrical work he had to face a number of problems to which the art of the cinema alone could offer a complete solution. In his book *My Artistic Life* Stanislavsky gives the story of the première of the play *The Loss of the "Hope"* in Studio I of the Arts Theatre. The play was staged and acted in a hall so small that the audience was close up to the actors. Owing to this closeness of the public and cast, all exaggeration of gesture and intonation had to go and every half-tone and subtle nuance acquired extreme importance. The unusually intimate association between actor and spectator produced a feeling of particular sincerity and directness, giving the actors the opportunity of

behaving as in real life. The lifelike quality of this performance impressed Stanislavsky; it revealed to him new possibilities of altering existing theatrical forms and transforming the stage performance into a more direct reflection of real life.

He wanted to carry this Studio I experience on to the big stage of the Arts Theatre, but this proved unexpectedly impossible, for the studio performance, created in a small hall, literally could be neither seen nor heard in one built to hold hundreds of spectators, and the charm of the intimate association between cast and audience vanished in a hall that demanded emphasis of voice and gesture. This experience showed Stanislavsky the limits beyond which reproduction of real life in a mass theatrical spectacle could not go. He decided to seek ways of completely fusing the actor's realistic behaviour on the stage with the emphasis inevitable in theatrical expression. He did not know, of course, that everything that had been discovered during the intimate performance at Studio I, though impracticable on a large stage, was perfectly possible to the new cinematic art, which both brings the actor close to the spectator and yet broadens out the hall to the ends of the earth.

Stanislavsky's endeavour to bring the actor's art as close as possible to a truthful and delicate rendering of human experience was more than once brought up short by the limitations of the stage. He tells how once he tried to introduce a long pause full of complex inner life. He sat for a long time on a bench set close to the footlights and went through a series of thoughts and emotions, but it was all lost on the audience because of the distance between. In close-up, however, the public would have been able to follow on the screen all the fine play of eyes and features and thus take in everything Stanislavsky wished to impart.

Stanislavsky's attempts to create scenery and surroundings as close as possible to reality were often criticised as an unnecessary introduction of superfluous realism on to the stage. This reproach is quite ill-founded. Great artist that he was, Stanislavsky sought to give a consistent unity to the life of the characters by means of the reality surrounding them, though he realised the limits set by the technical possibilities of the stage. In his reminiscences he tells how, when he was in the Crimea with his company, one day in a park he came upon a spot very similar to the setting of a scene in *Month in the Country*. He and Olga Knipper were moved to try out their scene in this natural setting, but after the first few sentences they gave it up. The conventional acting elaborated on the stage was in too great a contradiction with the natural surroundings for the sensitive artists to go on with their scene. The acting of a screen actor, however, approximating as closely as possible to normal human behaviour, can merge completely with the natural landscape faithfully reproduced on the screen.

It should be noted that the cinema, directly derived from dramatic art, in its development departs from the drama and comes closer in essence to the novel. The theatre too had tried to divorce itself from the literary dramatic form composed mainly of dialogue, but the efforts to introduce into the stage performance a broad picture of real life, as drawn in the novel, produced purely formalistic results. A rapid sequence of short descriptive scenes, a piling up of complicated sets intended to serve as platforms for a rapid transfer of the action to different places, and other conventional symbols and signs, which the producers tried to substitute for the realistic simplicity of painted scenery, could not ultimately exist side by side with the realistic acting of the artist.

Things were quite different in the cinema. There the novel-like performance, impracticable on the stage, proved quite possible. The cinema provided the realistic actor with many new opportunities of giving a direct

reflection of life, and it became the highway to the development of his art. Stanislavsky's work over a period of many years laid the foundations of this development. He was the first scholar in the theatre to arm himself and other actors with a powerful method of keen analysis combined with regular and consistent experimenting. But the application in cinematography of Stanislavsky's methods must not consist in a mere direct borrowing of results achieved in the theatre. It must lead to their further development in new technical conditions, both richer and more complex. The immediate contact between the art of the cinema and that of the stage came naturally through the actor. So it was with me in the very beginning of my independent work as a producer. Among the large number of actors of various theatrical schools I found those trained by Stanislavsky the most congenial.

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On starting independent work I was already convinced that the art of the cinema came nearer to giving a true reflection of real life than any other art, and that it could perfectly well do without the theatrical conventions that trammelled the stage. Stanislavsky's system became my school, and my first experiments in cinematography aimed at shaking off every convention of stage technique unnecessary to the screen-actor. From the first I took a dislike to artificial scenery, realising all the cinema's capacity to absorb creatively the natural surroundings in which living people—the actors—can move.

Having acquainted myself with Stanislavsky's method of training actors I realised that while the essence of this realist method was indispensable to cinematic art, much of its technique—created in the special conditions of the stage—was foreign to the very nature of the cinema.

The basis of the Stanislavsky method is first of all how to form a link between the character created and the actor's natural personality. Stanislavsky's profound analysis of the process that he called the "transmutation" of the actor—once supposed to be accessible only to men of genius—coupled with incessant experimentation, enabled the producer and actor, by means of consistent and concentrated work, to come closer to the great truthfulness in acting that always conquers the audience, which had previously been regarded as accidental or even of divine inspiration.

The first precept of Stanislavsky's that I studied was that of "living the part". By this Stanislavsky understood the process taking place in the actor's inner self. He knew what a deep gulf lies between the theoretical concept of the inner life of a character formed by the producer and the actor when thinking out the part, and the actual acting on the stage, between even the clearest realisation of what should be done and the acting itself. Every actor and every producer knows how difficult is the first step in this transition from the imagined to the real. The genius of Stanislavsky blazed the trail for this transition. He insisted that every actor should live his part as he would in real life if he were the character he is creating. Naturally, the actor's first steps in this direction must be connected with the world of his personal experience, with memories of how he has behaved in similar moments. When the actor lives some part of his role fully, be it only for a brief moment, he immediately experiences the joy of success so necessary to every artist. In order to progress, a creative artist must not only understand success but feel it. Such direct personal memories introduced into the life of the character he is creating give the actor an example of how he should feel throughout his part, though he has to bridge many gaps between his own consciousness and that of the character.

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When I first met Stanislavsky's pupils and followers, during the production of the film *Mother*, we found it hard going. How was I to find a way to

the hearts and minds of the people I was to direct, who were to create characters which as yet existed only in my imagination? That was my difficulty. Theirs was of a different kind; for they were artists, masters of a technique elaborated in close contact with the conventions of the stage. As a producer I found much of their technique unacceptable. Not that their acting had anything artificial about it (as was quite unjustifiably suggested at the time), but there were external peculiarities of acting unwanted on the screen, a theatrical emphasis of speech and gesture needed on the stage in order to be visible and audible to an audience separated from the actors by considerable distances.

Feeling as I did that the screen demanded from acting the nearest possible approach to human behaviour in ordinary life, the first task I set myself and the artists was the search for the greatest possible spontaneity and simplicity. I knew, of course, that a superficially natural reproduction of life was not sufficient, and that the screen, like the stage, needed a somewhat heightened expressiveness, but even then I realised the special capacities that distinguished the cinema from the theatre. Clearly, with an actor taken in close-up, what was needed first and foremost was complete truthfulness of acting.

My first experiences in producing met with a sincere and creative response and I felt that the foundations of complete mutual confidence had been laid. One of the first scenes which I took with the actress playing the part of the mother was the following: under the floor the mother finds weapons hidden by her son. This unexpected discovery reveals the terrible danger that threatens him—prison, Siberia, death. She is kneeling on the floor holding the weapons in her hands. There is a knock at the door. She raises her head. The door opens and the first thing she sees are the soles of the feet of a man who is being carried in. Without yet understanding what has happened, she guesses that the man is her husband. Here the task of the actress and of the young and inexperienced producer was an exceptionally difficult one. To begin with I left the actress to act this scene in her own way, and she naturally tried to do this as she would have done on the stage. She sought to arouse in herself a strong emotion expressed only by gestures: she stepped back, put her hands to her head, made various movements—each of which horrified me by their exaggeration. I felt all this to be unnecessary, but what was needed I did not yet know. First I removed all that seemed to me superfluous and exaggerated, and then I decided on a step that even today, as I recall it, amazes me by its temerity, for I was much younger than the actress and far less experienced. This was to suggest that she should act this scene without making a single movement or gesture, while retaining the inner emotional state she had found. The actress did this, and I saw how the complete immobility of one who could arouse in herself a strong and sincere emotion gave her an almost physical sense of suffering. Then I decided on a further step and allowed the actress to make a single gesture which I had noticed among the many she had made in the beginning. It was a movement of the hand as of someone naively fending off some terrible threat. I was so deeply persuaded that the inner truth of the emotion would find its best expression in this chosen gesture that I took the risk of filming this scene without any previous rehearsal so as not to lose its freshness.

Thus I began to discover the value of the actor's art through Stanislavsky's training. This experience grew and broadened during my work with other actors, especially with N. Batalov. There was not a single fraction of Pavel's role that was not important to us, "transitional", as we say. We tried to make Batalov's every appearance on the screen not only serve the development of the plot, but, above all, disclose the hero's state of mind. When I recall Batalov, I always see his look. All the charm of the character he created was

in his eyes. I was tempted to take him in close-up all the time so that the spectator could follow the man's emotions reflected in his eyes.



In my search for means of bringing real life on to the screen I tried to photograph people who were not professional actors. (In those days many people thought that I was trying to replace the actor by the "type", and in my inexperience I even talked like that myself at the time; but I did not set up the "type" against the actor.) Curiously enough, as soon as I began to work with non-actors I immediately discovered that they are faced with a number of difficulties which threaten to destroy the precious truth of their behaviour. The unusual surroundings, the conventional demands made by the producer, the presence of the camera—all this puts them off and creates a stiffness which they have to be helped to overcome. Here I discovered the decisive importance, in getting a man to behave unselfconsciously, of a simple physical task which completely absorbs his attention and thus frees him from stiffness. It is particularly important to make him believe in the reality of the task he is set.

My method can best be explained by a simple example. I was taking a "type" in the part of a soldier on guard at the cell where the meeting of mother and son takes place. Beside the soldier I set a plate with remains of food in which a black beetle was stuck. I had thought at first that the juxtaposition of the vacant face of the soldier, of Batalov behind the bars, and of the unfortunate black beetle hopelessly caught in the mess of porridge, would give a certain symbolic emphasis to the general atmosphere of the scene. But the figure of the soldier taken simply as a symbol would not merge with the truth of the scene. In order to enliven the static figure of the sentry, I suggested to the non-actor chosen for the part that he should push the blackbeetle into the porridge. He became extremely interested in this task and performed it very naturally. The result was most successful. Not only did the soldier come alive, but the very stupidity written on his face was transformed into action.

Work with non-actors made me realise that the method of plunging a man into a world of simple, real tasks was necessary even with a highly qualified professional actor, because the physical task makes real action and often helps the actor to free himself from any stiffness engendered by the conventional demands made upon him. Where does this stiffness come from? Why does it appear when you ask a man to do something according to a conventional instruction? It is not because he is bothered by the light or the noise of the camera. In order to perform an action not spontaneously but as instructed, a man must have his imagination set to work. He must imagine the desire he does not in fact feel. This is particularly difficult for the non-actor. The practical lesson drawn from work with the non-actors needed in the course of film-producing was that the fewer were the tasks demanding imagination that I set them, the more easily could I get them to behave simply and naturally.



Stanislavsky created a whole system of work intended to develop the power of imagination in the actor. And it is up to the producer, when helping the artist in his search for truthful acting, to do all he can to remove obstacles to the free play of imagination; further, he must help him by creating a series of impulses that support and develop it, for the less imagination the artist has to expend on picturing the external surroundings, the more easily will he concentrate on his emotions. And to be completely carried away by imagination is the true state of inspiration experienced by artists during the best moments of their creative life. Stanislavsky often used to say that his school could not

assure a brilliant future to every one of his pupils, and that it could only clear the right path on which each of them could consciously perfect his natural gifts within the limits of his talent. This path lies first of all along the lines of systematic education in creative imagination.

Temporarily and conventionally I shall separate two fields of work on creative imagination which in reality are closely linked together : the one connected with the external expression of the actor's thoughts and feelings, his behaviour, and the other connected with his emotional state. When speaking of the behaviour of the actor we must turn to that part of the work on the role which Stanislavsky and his pupils called " physical action ". In his search for complete unity in the actor's living of his part Stanislavsky was impelled in the later stages of his work to pay particular attention to this field. The actor is expressive, that is he vividly and clearly impresses the spectator, when he is active, when he solves not only the inner problems arising in his mind, but also the external physical problems confronting his will and impulses. The solving of the physical problem, as Stanislavsky rightly understands it, is as it were the culmination of the inner process and must be organically integrated with the whole of the actor's experience of living his part. The " physical action " can be best described as the directed action of one moved by thought and feeling.

The spectacular nature of stage and screen give particular interest to such human actions as are of a vivid visible character. The art of the actor in silent films developed first of all in the field of physical action, where both he and the producer had to seek the greatest possible truthfulness of expression. Here Stanislavsky's ideas proved exceptionally fruitful, while the practical experience of the silent cinema was in its turn useful and important for experimental work on a scale impossible for the theatre. The sub-titles were a sort of summing-up of the deep and subtle unspoken acting which gave full expression to the actor's emotional state.

It is important to note at this point that the cinema did not follow the road of pantomime, that is to say an art which had elaborated conventional signs to replace speech. The fact that the actor was brought close to the spectator, who could thus perceive the most subtle expressions of human emotion—a glance, a hidden smile, a barely perceptible gesture of the hand—freed the cinema from the need to invent artificial conventional signs.

I wish to ascribe to the gesture a wider significance than it is usually given. Let us agree to call gesture every form (except sound and speech) of the external expression of the actor's inner state, voluntary or involuntary, from the most delicate expression of the eyes to an arm raised to strike. Gesture is closely linked with emotion ; it is the primitive outward expression of the emotional state. Human speech may be devoid of emotional colouring. But as soon as feeling linked with thought arises in a human being, gesture inevitably appears ; it is gesture that lends to the spoken word the emotional colouring called " intonation ", and for intonation to be vivid and sincere gesture must be truthful and directly evoked by feeling. The gesture may even not be made, it may remain merely potential, exist as a latent gesture, an urge to make it, and this urge will give speech the needed vivid and expressive form.

The first claim made on the actor, on which Stanislavsky always insisted, is " transmutation ", the ability to transform, by the power of his imagination, his whole self with all his individual traits and qualities, into something different, which belongs no longer to him but to the character he impersonates. In this process of transition it is vital for him to preserve even in imaginary conditions a live personality thinking and behaving with the same singleness of purpose as does a real man in real life, and neither break nor lose the links indispensable to this singleness of human behaviour. That is why the basis of

the actor's art must be the faculty of finding, preserving and strengthening the inner links which make every moment of his acting an indissoluble part of the whole. It is the indispensable co-operation between actor and producer, directed at the main goal—that of giving life to the created character—that produces the capacity to feel when these links are broken and to restore them. The producer who remains an objective observer can immediately realise any such break in the natural unity in any fragment of the part being acted, and he can stop the actor the moment the false note is struck as an inevitable result of this break.

Stanislavsky's famous "I don't believe it!", with which he so often suddenly stopped an actor seemingly quite carried away by his role, always had this deep significance and brought the actor back to a thorough and searching revision of the connection between feeling and speech. A break of connections in the actor's behaviour within imagined (or, as Stanislavsky calls them, "suggested") conditions is the cause of many failures. The immense scientific value of Stanislavsky's work lies in the discovery of these basic connections, in the elaboration of methods by which the capacity to maintain them can be trained in the actor, and in the art of utilising them to find the technique for his work or his part.

Many know the difficulties experienced by the actor searching for the right intonation, when he tries to utter a word or a phrase first in one way then in another. Even if as a result of such blind attempts he does find an intonation which he or the producer regards as successful, he may well be unable to remember or to repeat it. The true intonation should be sought, not by hit-or-miss methods, but purposefully in the natural sequence of feeling, gesture and speech. This complex whole, indivisible in real life, should not be formally memorised by the actor but mastered as a real complete activity. This is the path towards realist art. When Stanislavsky, applying his special method of training, demanded that the actor should be able to act any given part of his role by setting and solving problems of exclusively physical action, it seemed paradoxical. Yet this demand was founded on a full understanding of the real nature of man's behaviour in life.



If these precepts of Stanislavsky's are applied to the cinema it will appear that the entire period of the silent film was in essence a development and elaboration of the school of acting linked with the search for the truth of physical action. In this sense the period of the silent film provided all that was basic and necessary for the later stages, when sound and speech came in. All my work with the speaking actor, our common search for realism in his acting, have proved that it is in the field of gesture, that is the primary physical movement born of emotion, that the actor must particularly seek to perfect his technique.

I knew what it was that frightened me in the acting of artists who did not belong to the Stanislavsky school. It was that their theatrical gesture was stronger than their feeling, and in some particularly bad cases the gesture had become fixed and conventional and quite unconnected with feeling. The Stanislavsky school does not in any circumstances admit such misconceived theatrical effects, the transforming of an expressive gesture into an impressive pose or live speech into declamation with purely formalistic emphasis.

During Stanislavsky's last stages of work on a part, when the actor had to go on to a large stage, assuming a large number of distant spectators, it was always his aim to preserve the realistic connection between feeling, movement and speech. When the rehearsal took place on the large stage Stanislavsky never failed to find the limits within which the actor, while remaining visible

and perceptible to the distant spectator, kept the links between the emotion experienced and its external expression unbroken.

The screen offers the actor a special opportunity for reducing gesture to the minimum, which in itself makes it all the more expressive. The screen actor has the advantage over the stage actor that he can behave towards the spectator just as he would towards someone standing at his side : but these special opportunities demand from him the closest possible attention to complete truthfulness in the subtlest of external expressions of his state of mind.

Behind the drama or scenario there always lies some phenomenon of life disclosed in the form of conflict. This conflict is always shown in the most expressive spectacular forms. The character's every thought and feeling must lead him to physical action, and speech expressing the content of the thought must be organically fused with physical action. Such is the law of any stage or screen production. Thus physical action may and should be considered as the most important, and in most cases the decisive, element with which the actor and the producer must concern themselves from the outset. That is why Stanislavsky concentrated so much on physical action as the starting-point in the actor's assimilation of his part.



My creative experience has often given me practical confirmation of these precepts. One of the most convincing examples in this respect was my whole work on the figure of Suvorov. All I had learnt about Suvorov made me see him as a man of great external expressiveness. At our very first meeting with Cherkasov, when I was casting the part of Suvorov, I was struck by the singularity of his behaviour. In the middle of a rather lengthy conversation on the scenario, on the character of Suvorov, on my demands on the artist, Cherkasov, apparently annoyed by something I had said, suddenly got up and began taking his leave without even explaining why he was going. I was hard put to it to detain him, literally on the doorstep, and to persuade him to continue our conversation. The firmness of the decision Cherkasov had come to after what I had said, his immediate translation of the inner decision into an equally firm definite physical action, made me see at once in what a marked degree his character coincided with the magnificent temperament that ruled the often abrupt but always purposeful actions of the great general. Probably it was precisely this sudden action of Cherkasov's that gave force and persuasiveness to my words, because in the end our negotiations reached a happy conclusion. Later on I saw how correct my choice had been. The whole of the work on the part of Suvorov was thus immediately set on a firm foundation because it rested on the natural elements of the artist's individuality. The whole of Cherkasov's art of mimicry, from the hand sending the troops against the enemy to the hand patting his dog, fell freely within the pattern that had been roughly outlined in the first search for such seemingly ordinary characteristic features of physical behaviour as gait and carriage.

One of the most difficult forms of acting is the monologue, which the artist has to deliver without the direct support of his partners and without the external impulses which could give him a direct perception of his links with his surroundings. I have often met with this difficulty, and every time I was helped out by a firm determination to integrate the artist's speech with an impulse, perhaps unrealised but nevertheless indispensably present, to perform some physical action. I recall how we were working on Suvorov's speech addressed to his soldiers at the critical moment of the terrible crossing of the Alps. The speech is a long one, being a scarcely altered text from contemporary memoirs. To deliver it without falling into rhetorical declamation was very difficult. The artist's first attempts sounded either maudlin or pompous. Even when some of

the phrases were successful they still did not integrate into a whole. We found the solution to the problem in Suvorov's own words : " Very well ; bury our military glory here ; but bury me with it. I will not give up my grey hairs to dishonour. I will not surrender. Dig my grave ; bury me here ! " We realised that direct physical action could be linked with these words. The actor had only to convince himself that to Suvorov the grave was no empty phrase but an actual pit which the soldiers would have to dig at his command and in which his dead body would be laid before he would make the least concession to fear. He had to believe that the grave he was talking of was not a conventional image accompanied by a gesture into empty space, but that the grave was actually there, and all he had to do was to take a few steps and show where it was to be dug. As soon as the actor realised the possibility of a definite action, there at once appeared what we call the rhythm of acting, the swift movement of a man who had taken a firm decision, a well-defined gesture far removed from sentiment or false dignity.



It is not only in separate fragments or scenes that unity and continuity of action are necessary. The actions of the actors carry the characters created by them through the whole play and bring their destinies to fulfilment, to the final aim of the general development of the play or picture and the final formulation of its ideas. Attaining purposefulness and continuity in this general movement means making the play realistic. In the general purposeful movement of the action every actor must have his personal basic aim, which he achieves at the moment of the play's ending. The directed impulse of his will, in opposition to the surrounding circumstances which help or hinder the attainment of the final aim, ensures what Stanislavsky called the " follow-through " of the actor in the play.

It is easier for the stage actor to achieve this " follow through " than for the screen actor. During rehearsals the stage play is, as a rule, run through in its entirety. Besides, on the stage the actor can continue his search for continuity in his living of the part as it passes through the whole play. In the cinema the purely technical conditions of camera work seldom afford this opportunity. In the great majority of cases it is quite impossible to rehearse the scenario as a whole. Nearly always it is only separate scenes that are rehearsed ; these come to form a whole only after all the work is done and they are assembled to form a continuous footage. When a film company goes on location, all the scenes connected with a particular place are filmed together, regardless of whether the actor has to act the beginning, the end or the middle of his part.

Nevertheless, thorough and concentrated work on obtaining this follow-through of Stanislavsky's is as necessary to the screen actor as it is to the stage actor. The problem of preserving the unity and continuity of an acted part lies mainly with the producer. This demands first of all intensive imaginative work, the faculty of being always able to see the future picture in its entirety, in the form not of abstract situations and aims but of animated, visible and audible scenes ; it demands secondly an unfailing visual memory which can retain vivid impressions of everything already acted by the artist. Only when he possesses and constantly develops these faculties can the producer help the actor in the complicated conditions of film-making, which force the actor to play disjointed parts of his role without an immediate perception of the natural sequence. I remember how when making the film *Mother* I purposely began with the last part of the picture, which demanded the maximum effort from the actress : the mother, tearing herself from the body of her dead son, lifts up the red

banner and walks towards the onrushing cossacks. This is the supreme moment of the part. Both in the beginning and the middle of the film there were scenes demanding strong emotional expression, but I realised that none of them should be allowed to equal the power of that final scene.



Stanislavsky calls the final conclusion, at which the idea-content of the play is directed, its "super-aim". The "super-aim" must exist in every true work of art. In a play or scenario all the movements, all the actions of the cast, must in the final count be subordinated to this super-aim. Inability on the part of the artist to penetrate the deeper meaning of the phenomenon he is observing manifests itself in the defects and flaws of "naturalism", which represents only life's external aspects and therefore produces only a collection of dead copies of living processes. Inability in the artist to grasp the phenomenon of life as a whole, and perceive all its living links with the all-embracing processes of social life, manifests itself in "formalist" distortions of reality. Formalism is particularly dangerous in the art of the actor and the producer because it can give the stage or screen living examples of distorted human behaviour. The impressive force of talented acting, if lacking in profound idea-content, can corrupt and distort the spectator's consciousness to a greater degree than can any other art form.

Realism alone, striving after a truthful reflection of all the wealth of real life, can become an art that helps mankind's creative work. The realist artist does not tear the spectator away from reality, but on the contrary stimulates human will and mind towards creative activity, away from passive contemplation of an imaginary world. It is for such realist art that Stanislavsky blazed a trail by discovering the true laws of the actor's behaviour on the stage.

Stanislavsky's teaching, which leads the actor from the practical search for living links between his own consciousness and that of the created character to a clear realisation of the final aims that must give this character a natural and realist development, and finally to a common effort of the whole cast towards realising the idea-content of the play as a whole, shows him to be an artist thoroughly imbued with the spirit of realism.

V. Toporkov in his book *K. S. Stanislavsky at Rehearsal* quotes him as saying about great art: "Should you ask me how I would describe it, I would answer: it is art having a super-aim and follow-through action." "This means", remarks Toporkov, "that Stanislavsky's main demand upon art was that it should have idea-content." We all know from personal experience that lack of idea-content, subjective stylisation, formalistic artifices, breaking away from the life of the people and creative popular activity, all this means the death of art and the destruction of the artist's talent. What Stanislavsky conventionally calls "super-aim" has become to us an actual part of practical social activity.

When working on the first version of *Admiral Nakhimov* I failed because I misunderstood the picture's "super-aim" and therefore suffered a wrong interpretation of it. Taking a superficial view of the main aim (that of showing Nakhimov to the people as a great admiral who had swayed the development of the Russian navy for many years to come) I let myself be carried away by the invention of imaginary moments in his private life, from a mere wish to make the picture more entertaining. To alter the first version of the picture it was not enough to make partial isolated corrections. The whole action of the picture had to be changed. By throwing out the unnecessary scenes and

shooting some entirely new ones which radically altered the image of Nakhimov, we ultimately succeeded in assessing and interpreting the "super-aim" correctly.



The idea-content of the picture must be the moving force in every scene ; it must live in every detail. This can be attained only when each part, and the whole picture, are perceived by producer and cast as one continuous movement in which there are no gaps between the feelings and gestures of any one of the actors, between gesture and speech, between the text and the translation into physical action of the idea it contains, between physical action and its direct physical object, and finally between this particular aim and the general aim towards which the action as a whole is directed.

Work on a stage or a screen play may present two possibilities : either the producer and the actor discover the truth of life hidden but actually existing in the scene, or else they introduce it as a necessary correction suggested by their perception of truth trained by practical realist experience. In both cases a clear and definite method of work is imperative. This is the method Stanislavsky discovered for theatrical art, which has found tremendous new possibilities of fruitful development in cinematic art.

Stanislavsky, the great realist artist, scholar and teacher, cleared the true path on which the great realist tendencies of Russian art become the living practice of the art of socialist realism.



—Translated by T. SHEBUNINA.
Slightly abridged from ISSKUSSTVO KINO,
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Note from p. 14

DR. OTTO SCHMIDT (born 1891) is a distinguished Soviet Academician specialising in mathematics and geography and known for his works on algebra, cosmogony and polar exploration. He has been a full member of the USSR Academy of Sciences since 1935 and is also a member of the Ukrainian Academy of Sciences, the Moscow Society of Naturalists, the American Geographical Society and the American Explorers' Club, one of the editors of the Soviet Encyclopedia, and a Hero of the Soviet Union. He was formerly Chairman of the Soviet Northern Sea Route Administration, and in this capacity he led the famous Chelyuskin expedition which left Leningrad in 1933 to sail round Scandinavia and through the Arctic into the Behring Straits ; the icebreaker Chelyuskin was crushed in the ice and sank on February 13, 1934, Dr. Schmidt with his team of scientists and the ship's crew living encamped on the ice for two months till rescued by plane in April 1934. He visited this country in December 1935 as a representative of Soviet science at the Congress of Peace and Friendship with the USSR.

ASJ MOSCOW LETTER

LIFE IN A CO-OPERATIVE SETTLEMENT

Ralph Parker

AT the foot of a slope beside a part of the outer boulevards still known as Earth Wall, there lies the Kursk railway station, point of departure not only for the Crimean Peninsula, Eastern Ukraine and Trans-Caucasia but for destinations much nearer Moscow, situated in the city's Green Belt. Somewhat eclectic in style—reminiscent of the *Kurhaus* of innumerable German spas—it is thoroughly Russian in the sense that it is built for people accustomed to assembling many hours in advance of departure. So its waiting rooms are vast, the services varied, there being even a small hospital with wards and a permanent medical staff for passengers taken ill, and the restaurant with its string orchestra is counted among Moscow's best. Russian, too, in the touches of fantasy. Long-distance travel in this land has something romantic about it. People entrain for the Altai, for Moldavia, for Samarkand, expecting as much adventure, surprise and contrast as do passengers embarking from Liverpool or Southampton on long sea voyages. The majority of long-distance travellers, except in the summer holiday months, are people on their way to new work in distant parts, work which in the present state of Soviet construction usually has something of the pioneer spirit attached to it.

The railway stations are suitably embellished. If their principal function is to shelter, sort out and eventually deposit travellers in their trains, they are also expected to provide the suitable background to the exciting and sometimes poignant drama of parting. No plain utilitarian functionalism for those who carry their dreams along with their luggage. Hence these baroque convolutions, this fairytale fantasy in fresco and mosaic. Again, stations are immensely important places in this land of long inland journeys, and to the Soviet people, children or grandchildren of men and women brought up in the direst poverty, elaborate ornament tends to be a sign of importance. The words rich and beautiful are still interchangeable in the vocabulary of many older Russians. The housewife who carefully lays a lace doily over the top of an austere designed television set is following the habit that made her hide the rough-hewn planks of the cottage *sunduk* under a strip of embroidered linen. Plainness means poverty to her.

But there is another side to the Kursk station. While long-distance travellers are making their last leisurely arrangements, others are hurrying to the suburban-line platforms, where an atmosphere of strict efficiency reigns. During these summer months the throng is specially dense, for tens of thousands of Moscow families close their city flats and move into cottages and *dachas*. This is one of the results of low rents. It is an important factor in the Moscow housing situation.

Passing the long line of kerbside flower-sellers, we reach the *elektrichka* that runs every twenty minutes or so twenty-one hours a day to and fro between Moscow and the Green Belt. One is struck by the extraordinary diversity of the crowd, with its free-and-easy summer dress dictated neither by the exigencies of extreme poverty nor by those of that other great leveller, fashion. When one has found a seat in the broad open compartment, with its passage in the middle, the bulging string bags hanging from hooks on the walls, the attentive girl conductor calling out the name of the next station, and ice-cream vendors offering their fourpenny "Eskimos," one has the impression of having joined a family circle. Somewhat reserved in their behaviour in the streets and shops, the Russians loosen their tongues as soon as they feel the wheels beginning to move under them.



AS well as the hourly changes in the composition of passengers, made more precise by the staggering of factory, office and shop hours, there are seasonal changes that are

strongly marked in these suburban trains. From June till late in August young children are but rarely seen, since Moscow spills out its children into summer camps and country lodgings as soon as the blossoming of the lilac indicates the beginning of summer. And there they stay, spending most of their time in the open air beside the innumerable ponds and rivulets of the Green Belt. These are the months, too, during which the smallholders and market-gardeners are most numerous on the trains. With enormous bunches of flowers, baskets of fruit and sacks bulging with milk cans and vegetables they make picturesque if awkward travelling companions as they move between the small market towns on Moscow's outskirts or into the city itself. Since 1948 trading conditions in these markets have been regulated by a set of rules designed to encourage the flow of trade. Anybody whose goods satisfy the strict standards of the inspectors can for the payment of the equivalent of a shilling or two lay his wares out on market stalls. Aprons, scales, and the implements of trade such as butchers' knives and so on, are provided by the authorities. But the most noticeable of seasonal travellers are the students. During the month of June, upwards of three million students attending universities and institutes or at extra-mural courses take examinations. Add to this the schoolchildren who matriculate that month, and the vast number of young people taking courses at technical schools, and you have a body of people capable of making their mark on every aspect of life in the country during the days of cramming. It is said that roughly one person in every three in the land, including children, is studying in some way. I can well believe it. The students form little closed groups of their own in the train, plying each other with test questions and going off into peals of laughter when someone muffs the answers. Cramming is reduced to a fine art, and it is easy to see the point of the student anecdote about the German, the Frenchman and the Russian who were asked in turn how long they would need to learn Chinese. The German ponders before replying that he reckons eight years would be enough to learn it thoroughly, the Frenchman unhesitatingly says three years. But all the Russian student asks is : " When are the exams ? "

By the beginning of July most of the examinations are over, but until mid-August one sees among the passengers young people in their best clothes going up for interviews connected with entrance into institutes and other higher educational establishments.

WITH so much to distract one on the journey, there is but little time to watch Moscow's untidy eastern outskirts pass. This remains the only side of the approaches to the city where the transition from town to country is blurred ; elsewhere one passes directly from neighbourhoods with handsome eight- to ten-storey buildings into rural conditions. But progress is being made here, too. The two principal highways, the Gorky and Yaroslavl roads, have been widened and planted with avenues of lime trees and, set back far from the pavements behind strips of parkway, blocks of country flats have been built. Gradually the wooden houses are being cleared away. The view causes one to reflect that, unlike most European cities, nineteenth-century Moscow's growth was not accompanied by estate development in the form of rows of standard working-class dwellings, terraces and tenements. And perhaps this is the reason why there is today no popular prejudice against flats and rows of connected dwellings. The whole trend is away from anarchy.

Fifteen miles from the centre of Moscow the train enters the Green Belt, an area scheduled for protection in the 1935 plan for Greater Moscow, and consisting mainly of natural forest. It was in this area that during the seventeenth century and perhaps a little earlier the rulers of Russia distributed land to a number of noblemen charged with maintaining levies to protect the city's approaches. As the danger of invasion receded the descendants of these landlords built mansions in place of fortresses and some of them trained their serfs to manufacture porcelain, furniture and good cloth. Built, decorated and furnished by these serf-craftsmen, the country mansions around Moscow passed from the hands of the aristocracy to those of the merchants during the nineteenth century and in 1917 became the property of the people. Today they are used as museums (the Sheremetiev home at Kuskovo houses the country's richest collection of porcelain, the Yussupov palace at Arkhangelskoye a valuable picture gallery), as sanatoria (such as the Bruce home at Monino, now belonging to the Trade Union movement), or as institutions for research and learning (the hydro-geologists have taken possession of the Riaboushinsky mansion at Kuchino). But by and large

their estates and grounds have remained intact and have been incorporated into the Green Belt.

We reach the edge of the former Riaboushinsky estate just beyond Kuchino and are in deep unspoiled forest at the next station, once known as Obiralovka, where, readers of Tolstoy will recall, Anna Karenina met her death as she travelled on this railway line to meet Vronsky. Now the station has a more prosaic name (for Obiralovka means the place of swindlers), and there is a pretty young stationmaster with fair curls round her green cap to see that passengers use the bridge and don't step out in front of trains. Five minutes' walk through a belt of pine trees brings one to the co-operative village "Hammer and Sickle," a group of about forty *dachas* in a clearing in the forest.

SOME fourteen years ago workers in the *Hammer and Sickle* ironworks in east Moscow, together with others from the neighbouring factory *Seventeen Years Since October*, formed a co-operative organisation to acquire this land from the Moscow Soviet. Largely by their own labour, they cleared and drained it and divided it into lots of about an acre each. The co-operative was able to buy building materials at wholesale prices from the State, and distributed them to its members on long-term credit. Building plans had to be submitted to the Moscow regional planning organisation, which retains control over the design of further additions. A few householders built according to standard plans, but the majority designed their own homes. Electricity was brought from the village across the railway and wells were sunk with expert advice. The co-operative appointed a superintendent and a watchman, whose houses were made winterproof, the rest of the *dachas* being habitable only between April and the beginning of October. During the war the settlement was requisitioned by the air force, but since 1945 has been used as a summer resort.

The *dachniki*, not all of them still employed at the two factories concerned, yet retaining their membership of the co-operative, place their families in the country with the coming of warm weather, close their Moscow flats and travel to and from work by electric train. Most of them are skilled workers. The co-operative has its elected chairman, who calls meetings which generally take place in the open air on a patch of common ground, where such questions as improvements to roads, the introduction of piped gas and ditching are discussed. A rate is levied as the result of frank democratic discussion. The *dachniki* are not owners of their houses in the full sense. Twenty-five years after the date of building the co-operative has the right to take over the property after refunding to the tenant the entire sum he has invested plus the value of capital improvements. All repairs are the responsibility of the occupier. The co-operative, however, can extend the tenancy. It should be added that in conditions of Soviet construction a guaranteed tenancy of twenty-five years seems to most people a reasonable arrangement. The feeling is widespread that within the next decade, provided there is peace, the age of abundance will have dawned and that any redistribution of personal property that ensues will be to the advantage rather than disadvantage of ordinary citizens.

In the meantime the *dachniki* make full use of their summer homes. Some of them are converting them for all-the-year use, putting in double window frames and installing central heating and running water. The gardens show signs of careful and intensive cultivation of soft fruits, fruit trees, vegetables and flowers. There are beehives, bathing pools, garages, petrol engines to pump water, and small sports grounds.

Nor are the *dachniki* ungenerous about enabling others to share the delights of this haven of quiet and health in the Green Belt. They let rooms and verandas to city dwellers, the majority of them being their fellow workers. On Saturdays and Sundays there comes a stream of weekend guests, to rest or to walk in a forest where for tens of miles around there is not a fence or barrier to deny access to glades and coppices where one has the impression of being not a mere eighteen but hundreds of miles from the city.

THE social composition of this little settlement provides a remarkable object lesson of the classlessness of Soviet life. Here you will find pensioners from the iron foundry spending the last years of their lives among their strawberry beds and poultry, men who have risen to be directors of important institutes, orphans of the siege of Lenin-grad who after their ordeal have found security as young workers at a Moscow factory,

the teachers, doctors, students, musicians and writers who are the children of the workers who built the settlement. The daughter of Fomichov, who has worked forty years at the foundry and wears the Order of Lenin for a technical invention, has just finished secondary education as a silver medallist and enters the Technological Institute next September. The three sons of the old man people call in when the plumbing goes wrong are qualified engineers, one of them the head of the Moscow electricity service, another chief of a ministerial department. Meeting casually around plank-topped tables under pine trees in the cool of the evening, they talk with that lack of social unease and shyness so characteristic of Soviet society. Nobody sirs anybody in this village, no caps are touched, the use of first name and patronymic* is general.

Their demands on life are modest. The market across the railway line, the cinema in the village, the library over which a faded little red flag flutters, a deep cool lake three miles away through the forest, and boundless opportunities for conversation with people proud to talk of their work, of their interesting and often hard lives, of their hopes for the future: what more does one need? It is a season to look back on the events of the winter, to discuss the acting of Lukianov in the Vakhtangov Theatre production of Maxim Gorky's *Yegor Bulichov and Others*, which most agree was the most outstanding theatrical event of the year, to argue about just what is behind this recent discussion on the lack of conflict in contemporary plays, agreeing that whatever is meant we shall not have good drama, or for that matter films or books, until writers take off their rose-tinted glasses and look at Soviet life as it is with its shortcomings as well as its triumphs, and give up their facile way of resolving conflicts by sudden almost unmotivated transformations of character. Why are Ilya Ehrenburg's American characters so much less convincing than the French in his latest novel-pamphlet *The Ninth Wave*? Who are the most promising of the group of ballet dancers who graduated from the Bolshoi Theatre school last year? Fyodorova, Chistova, Giravenko, Popova? A remarkable class which began its arduous training while the fate of Stalin-grad hung in the balance, some parents even running the risk of remaining in Moscow during the evacuation of 1941-42 so as to ensure their daughters' entry into this famous school. Almost all of them were taken into the Bolshoi Theatre last year and without exception they have "got on to the posters" with solo parts during their first season.

There has been much handing round of the literary magazines that contain that interesting new novel by Kochetov called *The Zhurbins*, a frankly written story of working-class life which many consider the best book of recent years. This novel deals with the post-war life of three generations in a single family, showing them at work and in their homes, revealing the new ethical and moral standards of Soviet working people and the sharpness of the conflict between new and old outlooks. The main subject of the novel is connected with the plan for reconstruction of the shipbuilding yard where the Zhurbin "dynasty" works. On each of them the changes make special demands, exacting from them a new attitude towards their work and causing many serious family problems which the author deals with with unusual directness. As always the public have responded warmly to a novel which strikes them as being truthful. There is probably no reading public in the world as interested in reading about their own lives as the Soviet public today. And when they turn to books on other themes, they look mainly for information about what is happening in the world beyond the Soviet frontiers, factual semi-documentary stories of China, Western Europe and America being in great demand. In the literature of escape there is not the slightest interest.

TALKING with Russians about literature and life in the relaxed atmosphere of the *dacha* garden, I form the strong impression that this thirst for the truth about life comes from an unquenchable fire of conviction that they can do something about their own fate. The knowledge they seek is the spring of their actions. They are restless to arm themselves for a life which they see in terms of the struggle of ideas. Did the patient, submissive Russian we were brought up to believe in ever exist? I wonder. Today you will find him nowhere within the Soviet frontiers. In the centre of every tale, every conversation, every event you will find another Russian, bristling with self-confidence, impatient for progress towards goals that are quite clear, yet with the saving grace of knowledge that his strength and his power to advance derives from a collective effort.

*For example "Ivan Petrovich" (Ivan son of Pyotr), a mode of address at once respectful and cordial.

Book Reviews

A REFRESHING BOOK

THIS* is a valuable book, for the author is at once a normal human being with few prejudices, and a Fellow of the Royal Society with a fine record as a scientist.

Much of the book is general in both approach and appeal; when Dr. Manton writes of Moscow, or Stalingrad, or family life, she is giving us her human view of things which many others have also described, if seldom so well. But when she describes the construction projects—with as light and happy fingers for statistics as some women have for pastry—and still more when she discusses biological research and education, she adds with very good effect her specialised knowledge to her general humanity.

In both fields she achieves something which, as far as I can recall, no non-political writer has yet achieved: to describe this astonishing new world with understanding and without either the bewilderment that almost always afflicts the non-socialist, or the mass preconceptions that practically everyone carries. I suppose the scientific approach has enabled her really and truly to disbelieve thirty years of the British Press, without letting any of it sink in.

The result is not merely refreshing: it is solid and rich—and light, too, like good pastry! Much of the writing is artless in the best sense, and even observations on trivial points add life and colour. She “debunks”—I have no right to use so ugly a word in connection with such a book—on an average two stock lies a page, silently, *en passant*—the best way to do it.

Dr. Manton is not uncritical; she tells us what she sees of good and what she sees of bad, and the good wins overwhelmingly—as it must, if a writer sticks to the facts. I find myself agreeing with many of her criticisms, and only once substantially at variance, over a passage where she expresses her feeling that the Soviet Press misrepresents the West and that the Soviet public misunderstands it. For myself, I think she rather overstates these two points. (In a friendly foreword, Lord Boyd Orr makes what I think is a rather greater error in a similar connection.)

Taken as a whole, I consider this one of the most valuable of recent books on the subject; and the publishers must be

praised too for having somehow managed to produce in a 5/- edition a book of attractive appearance, well printed on good paper.

D. N. PRITT, Q.C.

CHURCHES AND PALACES

AN interesting if minor social comment which rises to the mind of anyone who has had contact with official British circles in Moscow is that those individuals who protest the greatest love of ancient Russian churches and art also have the most profound detestation of modern Russia. Far from love and understanding of the past leading to an appreciation of the present, it appears to have a contrary effect, and the millions of Soviet citizens going about their work and pleasure merely obscure the scene in which icons are the only respectable objects of admiration.

Perhaps it is rather unfair to begin a review of Lady Kelly's book* *Mirror To Russia* with this reflection, because the eye that peers through the wrought-iron blinkers of the Embassy gates is to some extent the eye of an artist, and a fastidious one at that. This book is considerably more than some conventional reminiscences by the British Ambassador's wife, and the photographs with which it is illustrated are well chosen and exceptionally lovely.

Firmly standing on what she feels to be her own ground—for example the superb gardens of Peterhof and Tsarskoe Selo—Lady Kelly makes good use of her mirror. We see the pure pale colours of these vast architectural dreams; the marbles, the fountains, the illimitable vistas cupped in the northern air, the mists that float inland from the Gulf of Finland to veil the voluptuous statues with a touch of melancholy—in fact all that tremendous past which makes Leningrad a unique city.

But when the glass is held to catch the present, the image is distorted. Everywhere she goes, the unfortunate author is haunted by “the cold, haggard eyes” of those who read Marx. The crowds who wander among these trophies of the past look at them, according to her, “with unseeing eyes”, or “with childish wonderment”. The reviewer could not help wondering if somewhere among them was the Red Army girl found weeping in a pavilion at Peterhof one February day in 1944 just after the Germans had been driven out,

*MIRROR TO RUSSIA. By Marie Noël Kelly. (Country Life, 21/-.)

*THE SOVIET UNION TODAY: A Scientist's Impressions. By S. M. Manton, FR.S. (Lawrence and Wishart, paper 5/-, cloth 9/6.)

exclaiming: "Oh, our palaces! Our palaces!" Or the soldier who on seeing the smouldering Rastrelli facade sat down and wrote a poem then and there, "to relieve his heart". Curiously enough, her view of the Russian masses as cold and dour is frequently contradicted by her observations on particular Russians whom she describes as bringing an enthusiasm and taste to the restoration and preservation of the historic past which is "rather touching".

At times this anxiety to say something rude about the present day becomes unpleasantly like deliberate bad manners. She suppresses any mention of the laughing, cheering and dancing crowds on May Day, in order to be able to write of the "organised crocodile . . . waving their gory banners": she asserts, contrary to all known experience, that in all Moscow pasteurised bottled milk can only be had in two shops: she writes of the "comfortless homes" of the peasants, although—or perhaps because—she gives no sign of having entered any: and even when the Soviet authorities met the convenience of her party, visiting the small town of Muron on the Volga, by supplying them with a couple of new taxis, Lady Kelly cannot refrain from comparing them—quite gratuitously, because she did not refuse their services—with "Potemkin and his villages".

One may charitably suppose these and other lapses into mere boorishness to be the special contribution of the Embassy staff whom Lady Kelly thanks so profusely. One wonders whether it is their "erudition" and "accurate data", too, that are responsible for the highly original information which pops up, ever and again, in her text—of the kind which the Russians call *razvestistaya kliukva* ("the spreading cranberry-tree"), and which recalls the famous report of her fellow countryman that in Russia "ils ont un espèce de chien qu'on appelle *sobaque*".

Thus (to select from a rich variety) her readers learn of a hitherto unknown writer, or maybe actor, "Brinsov", buried in the Novo-Device cemetery (Briusov?): she reveals that the heroes of the ancient Russian sagas (*bylini*) were "horses" (can someone have mentioned *kobyly*—mares—in her presence?): that "breakfast as such is not known in Russia" (one wonders what the compilers of the new Soviet cookery book can have been thinking about when they wrote of *utrenni zavtrak*): that at Yaroslavl the English were building ships in 1504, i.e. nearly fifty years before they set foot in the country: that Olga, the tenth-century ruler of Kiev, was a "Lithuanian peasant who became a princess by marrying Igor" (750 years before that copycat Catherine, a Baltic peasant, became the wife of Peter

I)—and much else that is curious and was previously concealed from the world.

However, there is one Soviet institution which has Lady Kelly's unqualified approval—the ballet. Its beauty and power have enraptured her sensitive mind, and this reviewer, personally speaking, can forgive her a good deal for realising that *Bakhchisaraisky Fontan* is a great ballet. For the reader with antiquarian tastes there is much that is enjoyable in this book, and provided we can edge our way round that "huge static crowd" which is apparently (and rather uncomfortably, one would have thought) gathering "tremendous momentum" in a "cauldron", we can follow our sometimes well-informed guide on many pleasant excursions to church or palace.

I.A.

THREE ASPECTS OF GORKY

"HE is always preaching that we must have ideals, something better than everyday life." Who was this estimable gentleman? A Member of Parliament? A leader-writer on a national daily? A bishop? With these four books* lying before me I had looked up the *Encyclopedia Britannica* of 1913 to see what it had to say about Maxim Gorky before the words "Bolshevik", "Russian Revolution" and "Lenin" had entered its index.

Perhaps it is not quite fair to smile. Not many English people of that date could begin to realise that everyday life in Russia was only five years away from being yesterday's life, gone beyond recall, and the men passionately seeking to change it somewhat more than ineffectual angels beating their wings against the void. With the advantage of more than a quarter of a century's backward view on the surge and thunder of the Revolution and the solid construction of a new life that followed, it is far easier for us to recognise that Gorky was, from below, rooted in the reality of his time, than it was for the *Encyclopedia Britannica* of 1913, from above, to recognise that reality.

These four volumes, ridiculously cheap at the price, give three aspects of the writer. *Articles and Pamphlets* is Gorky, the political journalist; *The Artamonovs* is Gorky, the novelist; *Childhood and My Universities* is Gorky, the unexampled writer of autobiography.

Articles and Pamphlets, dealing mainly with his visit to America in 1906, articles in defence of the Revolution from 1928 on, and several fantasy satires, have the least permanent interest, save as study material for the man himself. In the main

*ARTICLES AND PAMPHLETS (6/6). THE ARTAMONOV (5/6). CHILDHOOD (4/6). MY UNIVERSITIES (3/6). By Maxim Gorky. (Collet's/FLPH).

* Sobaka is the Russian for dog.—Ed.

they are frank, hard-hitting polemics, undoubtedly valuable at the time, but with little save the signature to distinguish them from other political articles of the period; I suspect that many who find the arguments convincing and true will still find them no more memorable than hundreds written by equally competent journalists.

The Artamonovs is a long, quietly developing novel of a small mill-owning family in a provincial Russian town between 1863 and 1917. In that span of time Gorky traces against the vivid background of mill and small town the gradual growth of the corruption and brutality into which members of the family sink, and the slow disillusionment and bewilderment when every clutched-after justification falls away. There is no crude and explicit comment; the degeneration of Pyotr Artamonov develops implicitly and inevitably under the pressure of the life created round him; only the denunciation of the ever-watching old yardman, Tikhonov, breaks silence at the end like the judgment of a Greek chorus, pointed by Pyotr's final cry over the hunk of soggy bread—"Is this what you give me, for all that's past? For all my fears and all my life?"

Childhood and My Universities are Gorky at his finest. Unlike most autobiographies, the writer is not occupied with himself. The child and the boy take form through and against the unforgettable and minutely described picture of squalor and hatred which was his daily life and of the people by whom his whole attention was absorbed. In a few lines—the bishop, the children next door—and in full-length portraits—mother, grandfather, lodgers, comrades—all leap to life. Above all he has done consummately that most difficult of things, created on paper good people who are as enthralling and compelling as bad people. And in the love and enlightenment he drew from the knowledge of his grandmother, from the simple Tsiganok, from the lodger "That's Fine", lies the unique strength of the book, the extraordinary sense of love that is rarely expressed but always felt.

From the point of view of an English reader, the translation is quite pleasant, far better than earlier English translations, and in parts very good. But there are a number of awkward words and phrases, an inappropriate intrusion of Americanisms, and that besetting sin of modern Soviet translators, a quite mistaken use of Cockney idioms, apparently under the delusion that Cockney is a universal country or colloquial dialect instead of what it is, the dialect of the urban proletariat of London alone. Why on earth should not the publishers in Moscow make fruitful use of the *Writers' & Translators' Group*

of the SCR here, by sending each MS for their critical comment before publication, and so avoid these unnecessary blemishes?

B.G.

THE NORTHERN SEA ROUTE

THE obverse of Russia's strong "heartland" position is, of course, the denial to her of warm-water seaboard, for the Black Sea, although it does not freeze, stands in the relation of a mere ante-chamber to the Mediterranean, with a door which Turkey can open or close at will. Hence the northern sea route, the narrow water-lane which opens between the permanent arctic ice and the shore during a short summer season, is worth exploiting, dangerous and uncertain though its navigation may be. Since, moreover, practically the whole of Siberia drains to this water-lane by a series of great navigable rivers, it offers what may be expected to become the most economical route for bringing out the timber and minerals, the bulky produce, of far-northern Asia. Furs and gold, at present the most valuable commodities, are worth bringing out by air; nor is it without significance that long motor roads from the south have been constructed to the Lena and Kolyma goldfields for the purposes of supply.

The immense task of removing the hazards and difficulties of the northern sea route, including the preparation of charts and sailing directions, perfecting weather and ice forecasting, and furnishing adequate modern equipment at a chain of ports, has been vigorously tackled by *Glavsevmorput*, an *ad hoc* organisation, but progress has been slower than Moscow expected. The history of the route (in which English sailors played a not unimportant role) and of what has been accomplished in fitting it for regular traffic is here* told in detail, mainly from Russian sources (over 400 references are given), and as the author had the benefit of the informed criticism and great experience of the Scott Polar Institute, the book is important. It is, moreover, beautifully produced and illustrated.

E. G. R. TAYLOR.

*THE NORTHERN SEA ROUTE: Soviet Exploitation of the North-East Passage. By Terence Armstrong. (Scott Polar Research Institute, special publication No. 1. Cambridge University Press, 21/-.)

BULKY—BUT INADEQUATE

THE Royal Institute of International Affairs has now published the second volume of its series of Soviet foreign

policy documents,* selected, edited and in part translated by Miss Jane Degras. This second volume, as bulky as—and even more expensive than—the first (reviewed in the *ANGLO-SOVIET JOURNAL*, Vol. XII, No. 4), covers the period 1925-32. It includes some 250 documents, ranging from diplomatic notes and speeches to press statements and interviews.

As before, Miss Degras has provided the non-Russian-speaking student with a great quantity of valuable raw material, much of it not previously available in English. But at once it must be said emphatically that the selection is far from being representative. It can at best give only a very inadequate picture of Soviet foreign policy during a particularly crucial period.

Many documents, essential to any authoritative collection, are ignored. Soviet speeches and proposals before the League of Nations disarmament conference preparatory commission, for instance, have been entirely omitted; and the explanation offered—that they are “long and repetitive and their substance is summarised” in other documents—is anything but satisfactory. Their cogent analysis of the changing international situation is indispensable for any real understanding of Soviet policy at that time.

Stalin himself is particularly badly treated. Sixteen of his statements are quoted, and of these only one—a short article—is given in full. Many of his more important statements of the period are ignored completely. Unforgivable omissions include: *The Question of the Victory of Socialism in One Country*, from the pamphlet *On the Problems of Leninism* (January 1926); the report to the Seventh Extended Plenum of the Communist International (December 7, 1926); the speech at the Stalin Railway Workshops (March 1, 1927); the conversation with the first American workers’ delegation (September 9, 1927); and his reply to questions put by Ralph V. Barnes (May 3, 1932).

Many of those documents that have been included have suffered heavily from cutting. Here again, Stalin has been a major victim. Consider, for instance, his report on the international situation, delivered at the XIV Congress of the CPSU(B), reduced by Miss Degras to two-fifths of its original length. Among the sections completely excluded are those dealing with the stabilisation of capitalism, with imperialism, with the colonial and dependent countries, with contradictions developing between the victors and

vanquished of the first world war, and with antagonisms among the victor countries themselves. It is not perhaps without significance that the section in which Stalin emphasises the “gravitation of the revolutionary and socialist elements all over the world” towards the Soviet proletariat has also been omitted.

Miss Degras’s translation is always readable; but not always accurate. On page 72, for instance, Stalin is quoted as saying: “We cannot annul those decrees . . . which legalised the expropriation of the expropriators.” Actually Stalin added “. . . in our country”. Miss Degras is not, of course, under any obligation to follow official English texts; but any divergence affecting meaning should at least be footnoted. To take, as an example, one page alone—page 73: *enslaving* (line 3) reads “usurious” in the official text; *rejected* (line 6) reads “frustrated”; *controversial* (line 16) is “urgent”; and *Hindu* (line 38) is “Indian”.

In spite of its inadequacies, the volume cannot conceal the consistently peace-seeking nature of Soviet foreign policy.

From—

“We . . . must clearly show the workers of the world that our first words on entering the international arena are the maintenance of peace.” (Chicherin, III Congress of Soviets: p. 34.)

to—

“The best method of guaranteeing peace . . . is complete disarmament, or, at least, immediate and appreciable reduction of armaments. But we by no means decline to consider and carry out other, if less effective, guarantees of peace.” (Litvinov, November 1932: p. 548.)

these documents make the simple, straightforward and always practical Soviet attitude clear beyond doubt.

And, equally significant, in this selection not one word can be found to support allegations that Soviet foreign policy has ever in any way countenanced aggressive war.

W.R.

SOVIET LEGAL THEORY

THIS* is a fascinating book and one which will be of great value, not only to students of Soviet law but to all who are interested in Marxist thought, particularly on the subject of the State. It provides something which has not previously been available in the English language, viz., a selection of lengthy extracts from original works on the theory of law by many Soviet jurists and teachers since the October Revolution.

The Editor, Professor John N. Hazard,

***SOVIET DOCUMENTS ON FOREIGN POLICY.** Selected and edited by Jane Degras. Vol. II, 1925-1932. Issued under the auspices of the Royal Institute of International Affairs. (Geoffrey Cumberlege for the Oxford University Press, 45/-.)

***SOVIET LEGAL PHILOSOPHY.** By H. W. Babb and J. N. Hazard. (20th Century Legal Philosophy Series, Harvard University Press and Geoffrey Cumberlege, 48/-.)

of Columbia University, expresses the opinion that the selections (which are printed in chronological order) present "in a sense, a chronicle of the steps taken in the formulation of a Soviet legal philosophy". This idea seems to be completely refuted, however, by what is perhaps the most important document in the book, A. Y. Vyshinsky's *The Fundamental Tasks of the Science of Soviet Socialist Law*, an address given at the First Congress on Problems of the Sciences of Soviet State and Law, Moscow, in 1938.

Vyshinsky's address clearly marks a turning point in Soviet legal theory, after a long period of confusion and even treachery. He states that E. B. Pashukanis, who for some years until 1937 was the leading Soviet legal theorist and Director of the Institute of Soviet Construction and Law, had been found to be a member (along with N. V. Krylenko, Commissar of Justice) of the Trotsky-Bukharin group of traitors, and that he had carried on destructive work in the spheres both of legal theory and of the organisation of legal studies.

In the centre of the theories put forward by Pashukanis was the idea that the Soviet State, including the armed forces as well as the law, should be made to wither away, a theory which Vyshinsky states was "no accident" but was "aimed at handing our country over into the power of her enemies with her hands tied".

Vyshinsky's address contains the definition of law which is still accepted as correct by Soviet theory,[†] sets out the tasks then facing Soviet jurists ("the most important problem is that of building a system of Soviet socialist law on the basis of the principles of the Stalin Constitution"), as well as dealing with the theoretical confusion in relation to a number of problems which had been created by Pashukanis and his associates.

The selections preceding Vyshinsky's address begin with a short lecture by Lenin on the State (delivered to students in 1919) and include long extracts from the theoretical writings of both P. I. Stuchka, who was Commissar of Justice for some years from March 1918, and Pashukanis. Stuchka defined law as "a system of social relationships", thereby expressing a viewpoint which Vyshinsky said "drowned law in economics and robbed law of its active and creative role".

A lengthy extract from a work on *The Theory of the State and the Law* by S. A. Golunskii and M. S. Strogovich (published

[†]Law is the aggregate of the rules of conduct expressing the will of the dominant class and established in legal order, as well as of customs and rules of community life confirmed by State authority, the application whereof is guaranteed by the coercive force of the State to the end of safeguarding making secure and developing social relationships and arrangements advantageous and agreeable to the dominant class.

1940) is the outstanding document in the latter part of the book, which also contains selections from Stalin (*Certain Problems of Theory*, 18th Party Congress, 1939), Vyshinsky (*The Soviet State in the War for the Fatherland*, 1944) and I. P. Trainin (*The Relationship between State and Law*, 1945).

RALPH MILLNER

TOP QUALITY TEAM

TO the average British reader, the title of Alexander Chutkikh's book* would suggest *sport*, probably football; I am quite certain that the vast majority would be disappointed to find that it was "all about work"; and I guess that this would be true in America, France or any other capitalist country.

Chutkikh tells us on p. 129: "As soon as they finish their shift, our weavers and spinners go to their classes in the schools for young workers, or attend fixers' courses, or go to the Textile High School." There is no compulsion about this; the only driving force there is behind it is the Soviet worker's desire to become highly skilled at his job, so that he can increase the quantity and improve the quality of his production, and so play his part in earning the name *Top Quality Team* for his section, mill, office, factory, transport depot, or other place of work. Since Chutkikh the textile worker introduced this particular form of socialist emulation on his own section at the mill, it has spread throughout Soviet industry, and the name of Chutkikh is known to every worker in the USSR.

Chutkikh was awarded the coveted Stalin Prize for his efforts. One wonders what the "Socialism Kills Initiative" theorists think when they read about things like this.

It is this spirit that has enabled the Soviet people to build the largest and best-equipped university in the world in three years, to build the great Volga-Don Canal in less than one-third the time it took to build the Panama (which is only about half the size), to build houses, schools, hospitals and so on at a hitherto undreamed-of speed. On p. 127 the author tells us (quoting Kuznetsov, chairman of the All-Union Council of Trade Unions): "In 1948, more than two million production conferences were held in enterprises belonging to industry, transport, building and agriculture." (The British trade unionist reading these lines may remember the oft-repeated term "managerial functions" and the rebuffs accorded to attempts to turn discussion on to something bigger than "the state of the lavatories", "the quality of the canteen tea", or "cycle storage space".) Chutkikh goes

*TOP QUALITY TEAM. By Alexander Chutkikh. (FLPH, unpriced.)

on to tell us: "Over four million suggestions for improvements in production were adopted. These figures speak more eloquently than words of the Soviet people's concern for the welfare of national economy." The British worker may wonder whether, if he were to "meddle in such matters", the foreman would tell him he wasn't paid to think—and then go to the manager with the idea as if it were his own; and when the idea was adopted and production increased, would the ratefixer come round to "re-price" the job? And would the wider application of such ideas cause "redundancy"? It is such questions as these that tend to make the average British worker more interested in football, cricket, racing or gardening than in increasing production.

But no such questions arise in anybody's mind in the Soviet Union. Chutkikh's book shows that a new kind of man has developed: "Human nature *has* been changed." Those who still doubt the possibility should read this book.

Clr. E. DIXON (Coventry)

VAVILOV ON SOVIET SCIENCE

IN recent years it has been fashionable to mock at the Russians for commemorating the anniversaries of scientists of their nation whom they claim as the first inventors or discoverers in a number of fields. The names of the men in question being little known today in the West, the suggestion is sometimes made that the Russians are making false claims, inspired by some unhealthy spirit of national self-assertion. So firmly had this attitude become established that an article in the March issue of a publication so remote from Kremlin control as the United States *Bulletin of the Atomic Scientists* created quite a stir. The writer, whose aim was to disturb what he considered a dangerously smug state of mind concerning contemporary Soviet science, warned his readers that they were deceiving themselves if they did not appreciate that "Russian science has a 200-year-old tradition of high achievement", beginning with Lomonosov's enunciation of the principle of the conservation of energy in 1747, a century earlier than Meyer and Helmholtz. "It is true that Popov used electric waves for the transmission of messages before Marconi, and that Yablochkov's incandescent lamps preceded those of Edison by several years."

The late President of the USSR Academy of Sciences, the eminent physicist S. I. Vavilov, in the pamphlet *The Progress of Soviet Science**, prefaces his account of science since the October

Revolution with a review of the achievements and traditions of pre-revolutionary Russian science which helps to explain to the Western reader how it has come about that his awareness of Russia's scientific contributions is frequently inadequate.

After a promising start in the Kiev period, Russian science suffered a severe setback as a result of the Mongol invasion in the thirteenth century. In the field of science, as in so many others, Russia paid a heavy price for acting as Europe's shield against barbarism. (The service has hardly yet been adequately acknowledged in the West, while Russia's losses incurred in rendering it have been made a reproach to her.) Consequently, Russia lagged behind at first in the great forward movement of European science which began in the sixteenth century. When at last, with Lomonosov in the eighteenth century, the Russian people began to show what they could do, they revealed an amazing quantity and quality of talent.

In relation to science, however, as with everything else in the cultural sphere, there was not one Russia but two. On the one hand, many remarkable men, pioneers in many departments of research; but on the other, "official" Russia, neglecting and despising them and striving to restrict their activities. All that the Tsarist Government wanted from science was a mere mechanical reproduction of the minimum of technicians indispensable for military and administrative needs. Research was starved of funds and facilities. Official suspicion of genuine science culminated in the tragic disruption of Moscow University in 1910, when police interference led to the mass resignation of the professors.

Because this was the socio-political framework in which Russian science had to struggle before 1917, the homeland of Yablochkov and Ladygin was unable to produce a single incandescent electric bulb. The brilliant initiatives of Russian research workers could not be followed up in their own country; all too often, the foreigners who "borrowed" their ideas—to the advantage of mankind—did so without acknowledgements to the pioneers.

Academician Vavilov describes the benefits to Russian science that resulted from the October Revolution, and traces the principal achievements of Soviet scientists. His account of the organisation of science and the role of science in the national economy is illuminating. "To Soviet scientists", he observes, "the past decades have made the idea of planning a natural and accustomed concept, an essential attribute of their work. There is no possibility, of course, of planning out 'unexpected' scientific results and discoveries; but all true science must contain a very large proportion of well-founded anticipation and prevision. . . . The plan of scientific development in a socialist state must, of course, link up with the state

*THE PROGRESS OF SOVIET SCIENCE. By Academician S. I. Vavilov. (FLPH/Colet's, 6d.)

economic plan. At the same time science must always work ahead, accumulating reserves for the future; only then will it fulfil its role of illuminating the path to be traversed in practice."

BRIAN PEARCE

THE USSR AND WORLD ECONOMY

THIS report* provides a valuable account of post-war Soviet economic expansion against its world background. It summarises the results achieved by the 1946-50 Five Year Plan (pp. 31-33) and shows that the rate of increase of Soviet industrial production in 1951 (16 per cent above 1950) was more rapid than in all other industrially advanced economies except Western Germany and Japan, and that the overall world increase of 12 per cent was exceeded in all the "centrally planned economies" except Yugoslavia (p. 5).

A very valuable section on East-West trade (pp. 109-118) shows how U.S. and subsequent West-European restrictions led in 1951 to a decline of exports to Eastern Europe and the USSR of vehicles, machinery, non-ferrous metals, cotton, jute, rubber, and wool. The effect of this loss in trade on the West itself is made clear: even at the 1950 level of East-West trade, "if the coal, grain, and timber which were obtained from Eastern Europe ... had been purchased in North America, the effect would have been to increase the dollar deficit [of Western Europe] by about \$350 million" (i.e. by more than 25 per cent); it is added that such an effect began to operate in 1951 (p. 113).

However, Eastern Europe itself succeeded in coping with the problem. The report tells us that "available indications are" that trade between the centrally planned countries themselves "rose sufficiently to offset the decline in the quantum of their trade with other countries, both in 1950 and in 1951". The key role in this trade was played by the USSR: it exported to Eastern Europe iron ore, non-ferrous ores and metals, raw cotton, industrial and agricultural equipment, and foodstuffs, in return for coal, oil, food products, and water and rail transport equipment. "In 1951 the [total] volume of [its] trade had risen to three times that of pre-war."

R.W.D.

*WORLD ECONOMIC REPORT, 1950-51. (United Nations Department of Economic Affairs, New York, April 1952, \$1.50.)

INTERNATIONAL ECONOMIC RELATIONS AND TRADE

IN preparation for the International Economic Conference held in April in Moscow, the March issue of *Voprosi Ekonomiki* was devoted entirely to questions of international economic relations and trade, and, what is more, was made

available to those who attended the conference in an English translation.* Copies of this issue can now be obtained in this country; and to those of us who do not read Russian but are interested in the developments in economic thought in the Soviet Union, it is a great pleasure to be able oneself to read through a complete issue of this, the leading journal on questions of economic theory published there. In addition, four booklets† also dealing with questions of international economics have been published in English by the Foreign Languages Publishing House, two of them (Osipov and Smirnov) being reprints of contributions to the issue of *Voprosi Ekonomiki*.

These publications will be of great interest to many others besides economists. They show how much attention has been given by prominent Soviet economists to problems of international trade, and how practical and purposeful their approach is. These articles also show fully and irrefutably, with many quotations of statements made by Lenin, Stalin and other leading Soviet politicians, that from its earliest days the Soviet Union has always sought to live side by side with the capitalist world on the basis of commercial ties with all countries. Osipov, for example, writes as follows: "Defining almost a quarter of a century ago the real basis of agreements between the USSR and the capitalist countries, J. V. Stalin said that 'exports and imports are the most suitable grounds for such agreements'. This precept retains its full force and significance today" (p. 28).

There is also in these articles some concrete information about the goods that could enter, with mutual benefit, into trade between "East" and "West". "Before the war," writes Alexandrov, "... Eastern Europe supplied 35 per cent of the timber imports of Great Britain, France and Belgium and 47 per cent of those of Germany. Eastern Europe supplied 20 per cent of all the wheat, 18 per cent of the fodder grains, 20 per cent of the eggs, etc., imported by Western Europe. At the present time Eastern Europe is in a position to export still larger quantities of commodities like timber, furs, certain kinds of ore, oil products, coal, wheat, rye,

*PROBLEMS OF ECONOMICS, No. 3, March 1952. (Pravda/Collet's, 2/6.)

†THE SOVIET UNION AND INTERNATIONAL CO-OPERATION. By L. Fituni. (FLPH/Collet's, 6d.)

INTERNATIONAL TRADE AND THE IMPROVEMENT OF THE STANDARD OF LIVING IN THE WEST. By M. Alexandrov. (FLPH/Collet's, 6d.)

NORMALISATION OF WORLD TRADE AND THE MONETARY PROBLEM. By A. Smirnov. (FLPH/Collet's, 4d.)

THE RESUMPTION AND DEVELOPMENT OF INTERNATIONAL ECONOMIC RELATIONS. By A. Osipov. (FLPH/Collet's, 6d.)

butter, meat, sugar, eggs, etc. On the other hand, the vast peaceful construction that is going on in the Soviet Union, the European People's Democracies and the Chinese People's Republic opens up the possibility of placing big and profitable orders with the industries of the Western countries for equipment for the innumerable construction schemes that are being carried out in a vast area stretching from the South China Sea to the Danube" (p. 13). The article goes on to point out that there is also a market for consumer goods which could give substantial increases in British exports even if it were restored only to pre-war levels. But "in view of the steady improvement in the conditions of life of the people in East-European countries this could easily be exceeded" (p. 14).

Fituni also shows how the Soviet Union could help the undeveloped countries of the Far East "with machine tools, power, electrical and transport equipment, installations for the mining industries, for the textile and other light industries, for agriculture, as well as with the other machines the countries of this area require for their industrialisation and for the development of their agriculture, as well as cement, timber, fertilisers, grain and consumer goods. In exchange for these goods the USSR would be interested to obtain such goods as jute, rubber, shellac, rice, copra, spices, tea, tin, cinchona bark, etc." (pp. 29, 30).

There are no economic reasons whatever for the capitalist countries to neglect these possibilities of trade. The reasons are solely political—the "cold war" and the conditions attached to American aid which compel discrimination from the side of the "West", to the very serious detriment not of the countries of socialism and people's democracy, but of the peoples of the "West". On all this there is a great deal of sound argument and fact in these articles and booklets.

Economists are likely to find particularly interesting the article by Smirnov on *Normalisation of World Trade and the Monetary Problem*. It contains some penetrating comments about devaluation and monetary inflation. Also of special interest are the remarks made in several of the articles, but particularly in that by Korolenko in *Problems of Economics*, about trade relations between the USSR and the People's Democracies.

Britain, faced as she is with a balance of payments crisis of extreme gravity, could with the development of East-West trade obtain immediate and certain relief. "The resumption of the former, natural trade relations with the countries of Eastern Europe", writes Smirnov, "would enable them to obtain the goods they require without spending gold or dollars. The fact of the matter is that trade relations between the countries of Western

and Eastern Europe could be based on barter and clearing arrangements which would obviate the necessity for foreign exchange (either dollars or other currencies)" (p. 29).

No economist who fails to address his mind to the possibilities of East-West trade can claim seriously to have sought a solution to the difficulties that we now face. It is because these articles are such a considerable aid in that task that their publication in English is a matter of great importance.

J.E.

PUBLICATIONS RECEIVED

- A NEST OF THE GENTRY. By Ivan Turgenev. (Collet's/FLPH, 7/6.)
 AVICENNA—A MILLENNARY SYMPOSIUM. Ed. G. M. Wickens. (Luzac, 15/-.)
 CONFERENCE SKETCH BOOK. By Joan Robinson. (Heffer, 2/6.)
 DON JUAN IN THE RUSSIAN MANNER. By A. Tchekhov. Tr. Basil Ashmore. (Peter Nevill, 10/6.)
 ETYMOLOGICAL DICTIONARY OF THE RUSSIAN LANGUAGE. By A. G. Preobrazhensky. (Columbia University Press & Geoffrey Cumberlege, £5/7/6.)
 FATHERS AND SONS. By Ivan Turgenev. (Collet's/FLPH, 8/6.)
 FREEDOM AND THE TRAGIC LIFE: A STUDY IN DOSTOEVSKY. By V. Ivanov. (Harvill Press, 16/-.)
 FREEDOM IS THE RIGHT TO CHOOSE. By Archibald MacLeish. (The Bodley Head, 12/6.)
 KNIGA O VKUSNOI I ZDOROVOI PISHCHE (BOOK OF TASTY AND WHOLE-SOME FOOD). Cookery Institute of the Academy of Medical Sciences. (Collet's/Pishchepromizdat, 16/6.)
 MY UNCLE JOE. By B. Svanidze. (Heinemann, 10/6.)
 NEGOTIATING WITH THE RUSSIANS. Ed. R. Dennett & J. E. Johnson. (World Peace Foundation, \$3.50.)
 QUAKERS VISIT RUSSIA. Ed. K. Lonsdale. (Friends Peace Committee, 3/6.)
 RUSSIA: A HISTORY. By S. Harcave. (Lippincott, 60/-.)
 RUSSIA'S LOMONOSOV. By B. N. Menshutkin. (Princeton University Press & Geoffrey Cumberlege, 25/-.)
 SPINOZA IN SOVIET PHILOSOPHY. Essays. Tr. and Ed. G. L. Kline. (Routledge & Kegan Paul, 25/-.)
 THAT PLAYTHING PEACE. By A. G. Enock. (The Bodley Head, 1/6.)
 THE SOVIET CONSTRUCTION SCHEMES. (Pictorial Charts, 2/6.)
 THE SOVIET PRICE SYSTEM. SOVIET PRICES OF PRODUCER'S GOODS. THE SOVIET ECONOMY DURING THE PLAN ERA. All by N. Jasny. (Stanford University Press & Geoffrey Cumberlege, \$2.00 or 16/- each.)
 Russia 1952. (British Workers' Delegation/BSFS, 6d.)
 Social Insurances in the USSR. (Collet's/Profizdat, 6d.)
 Soviet Studies, Vol. IV, No. 1, July 1952. (Blackwell, 9/-.)
 Transport in the USSR. (British Workers' Delegation/BSFS, 3d.)

RESIGNATION OF SCR SECRETARY

JUDITH TODD

AFTER over fifteen years' service to the Society, Miss Judith Todd has resigned from the secretaryship and has taken up a professional accountancy post. Most members of the SCR will know that few organisations have been fortunate enough to have a secretary so capable and so hardworking as Judith Todd. Largely because of her unremitting and devoted work, the SCR has made steady progress through good times and bad. The Executive Committee have placed on record their deep appreciation of her services, and feel sure that the whole membership will be glad to know that she has agreed to serve on the Executive Committee and so maintain her long and fruitful connection with the Society's work.

SCR NOTES

LONDON MEETINGS AND OTHER EVENTS

July—September 1952

(All at 14 Kensington Square unless otherwise stated)

July

- 17th: Display of material on *English Education* collected for the Academy of Pedagogical Sciences, Moscow. (**Education Section**)
- 20th: Report by members of Writers' Delegation on their recent visit to the USSR. A. E. Coppard, Arnold Kettle, Doris Lessing. Chair: Eric Hartley. (**Writers' Group**.)
- 23rd: Soviet Scientific Discussions 1950-51: *What are Idealist Trends in Chemistry and Physics?* Dr. H. Taylor on *Molecular Structure and the Theory of Resonance*. A. Suddaby on *Quanta, Particles and Fields*. Chair: M. Cornforth. (**Science Section**.)
- 30th: Film show: *Moscow Constructions; New Stadium; Flowering Ukraine*. Crown Theatre, W.I. (**Architecture Group and Film Section**.)

August

- 13th: Departure of Education Delegation to the USSR (at the invitation of the Union of Teachers in Primary and Secondary Schools). Dr. M. M. Lewis (Chairman), Miss Deana Levin (Secretary), Miss M. Cooke, Mr. G. T. C. Giles, Mr. Peter Ibbotson, Mr. Ray Lamb, Mrs. Hilda Lewis, Mr. Max Morris.

September

- 8th: Departure of SCR delegates with joint friendship delegation (SCR, BSFS and Scottish-USSR Society). Mr. D. T. Richnell (Chairman), Mr. G. R. Barker, Mrs. Eleanor Fox, Mr. John Pinckheard, Mr. Bernard Stevens, Mr V. Weiss ("Vicky").

SCR PROVINCIAL SECRETARIES

Readers of THE ANGLO-SOVIET JOURNAL may wish to get in touch with the Secretary of the local SCR Committee so that they may be kept informed of local SCR activities. The following list is appended for their convenience.

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